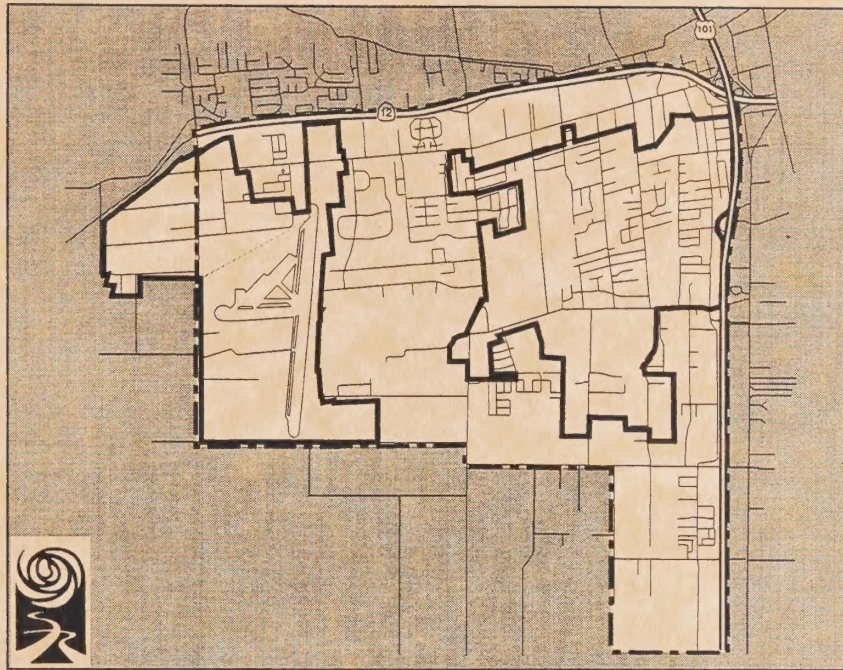




FINAL SUBSEQUENT ENVIRONMENTAL IMPACT REPORT
(COMMENTS AND RESPONSES)

SOUTHWEST SANTA ROSA REDEVELOPMENT PLAN

PREPARED FOR:
CITY OF SANTA ROSA HOUSING AND REDEVELOPMENT

PREPARED BY:
EIP ASSOCIATES

MAY 2000

**SOUTHWEST SANTA ROSA REDEVELOPMENT PLAN
SUBSEQUENT ENVIRONMENTAL IMPACT REPORT
(FINAL)**

– COMMENTS AND RESPONSES –

SCH # 99102091

Prepared For:

City of Santa Rosa
Housing and Redevelopment

Prepared By:

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May, 2000

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APPENDIX A: California Tiger Salamander and Salamander Tunnels

I. INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) Guidelines, a Draft Subsequent Environmental Impact Report (SEIR) for the Southwest Santa Rosa Redevelopment Plan was completed and circulated for a 45 day public/agency review and comment period. The Draft Subsequent EIR was released on March 10, 2000 with the comment period extending through April 24, 2000.

On April 10, 2000 a public hearing to address the adequacy of the Draft EIR was held at Santa Rosa City Hall before the Santa Rosa Redevelopment Agency, at which time oral and written comments were submitted. This Final SEIR contains written comments on the Draft SEIR presented at the hearing, as well as those written comments submitted during the review period, along with the Minutes of the hearing prepared by the Redevelopment Agency. Responses to written and oral comments are also contained in this Final SEIR.

Those letters of comment (and Minutes of the hearing), regarding the adequacy of the Draft SEIR that require responses are numbered in the left hand margin. The responses are correlated with the comments by the numbers shown. Each page of comment within a letter is followed immediately by responses (i.e., response pages face comment pages). If verbal comments made by a speaker at the Redevelopment Agency hearing of April 10 mostly repeat written comments prepared by the speaker, responses were prepared for the written comments. Where a comment is substantially the same as another comment, the response refers the reader to the previous response.

A list of the letters of comment requiring responses is provided on the next page.

CHAPTER 1

The first section of the book is devoted to a discussion of the basic concepts and principles of the theory of functions of a real variable. It begins with a brief review of the real number system and the properties of the real numbers. This is followed by a discussion of the concept of a function and the properties of functions. The section concludes with a discussion of the continuity of functions.

The second section of the book is devoted to a discussion of the properties of the derivative of a function. It begins with a discussion of the definition of the derivative and the properties of the derivative. This is followed by a discussion of the rules for differentiating functions. The section concludes with a discussion of the applications of the derivative.

The third section of the book is devoted to a discussion of the properties of the integral of a function. It begins with a discussion of the definition of the integral and the properties of the integral. This is followed by a discussion of the rules for integrating functions. The section concludes with a discussion of the applications of the integral.

The fourth section of the book is devoted to a discussion of the properties of the definite integral. It begins with a discussion of the definition of the definite integral and the properties of the definite integral. This is followed by a discussion of the rules for evaluating definite integrals. The section concludes with a discussion of the applications of the definite integral.

II. LIST OF LETTERS OF COMMENT REQUIRING RESPONSES

<u>Commentor</u>	<u>Comment No.</u>
David Cook, Herpetologist	1-5
Carolyn Dixon	5-8
Len Swenson, Sierra Club, Sonoma County Group	9-10
David Cook, Environmental Specialist Sonoma County Water Agency	11-12
Karen J. Miller Chief, Endangered Species Division U.S. Fish and Wildlife Service	13-14
Robert W. Floerke Regional Manager, Central Coast Region California Department of Fish and Game	15-23
John L. Short Senior WRC Engineer California Regional Water Quality Control Board, North Coast Region	24-30
Barbara J. Cook, P.E., Chief Northern California - Coastal Cleanup Operations Branch California Environmental Protection Agency Department of Toxic Substances Control	31- 35
Redevelopment Agency of the City of Santa Rosa Special Meeting April 10, 2000	36-41

(Letters received after the end of the 45 day review and comment period.)

State of California
Governor's Office of Planning and Research
State Clearinghouse

—

Harry Y. Yahata
District Director
California Department of Transportation

43

Donna Strom, Sonoma County Wetland Watch

44

Note: This page is intentionally left blank in order to maintain the sequence of response pages facing comment pages.

March 27, 2000
David Cook
833 Richardson Lane
Cotati, CA 94931

Stephen F. Burke
Housing and Redevelopment
City of Santa Rosa
PO Box 1806
Santa Rosa, CA 95402-1806

Southwest Redevelopment Plan Draft Subsequent SEIR

Dear Burke,

The Southwest Redevelopment Plan (Plan) Draft Subsequent Environmental Impact Report (SEIR) is inadequate in evaluating and reducing impacts to less than significant levels to the California tiger Salamander (CTS). The Plan will threaten the long-term survival of CTS in the southwest area of Santa Rosa, and will contribute to the listing of the species under the federal Endangered Species Act. The Santa Barbara population of CTS was recently emergency listed as endangered by the U. S. Fish and Wildlife Service, primarily due to habitat loss from rapid urban and agricultural expansion. The Santa Rosa population of CTS is under similar threats and the Service has not made a final ruling for this population. The Plan will result in significant unavoidable impacts to the CTS for the following reasons:

1. CTS at Southwest Community Park are not identified in the SEIR nor are impacts to this site disclosed. The 350-foot diameter vernal pool at the park is a known breeding site of CTS. Ongoing research indicates that grasslands at the park and to the east are occupied by CTS (Figure 1). Greater than 90% of the grasslands surrounding the vernal pool has been developed and any additional loss of grassland habitat would likely result in the local extinction of the CTS.
2. Protection of both breeding sites and surrounding habitats used by adult and juvenile CTS is essential for maintaining viable local populations. The Plan's conservation of approximately 120 acres of wetlands and grasslands as open space, in two plots, at the old Santa Rosa Air Center is insufficient for the long-term survival of the CTS in southwestern Santa Rosa. CTS can move a mile or more during migration and leading experts indicate that 480 acres of contiguous habitat with a 700-1600 foot buffer around breeding sites is necessary to conserve CTS at any site (Shaffer et al 1993. Status Report: The California Tiger Salamander. Dept. of Fish and Game; and Petranks 1998. Salamanders of the United States and Canada. Smithsonian Institute Press.). The two open space areas shown on Figure 3.1.2-1 of the SEIR should be enlarged to include wetland and grassland habitats within one mile of CTS breeding sites, include all known locations of CTS, and total at least 480 acres of contiguous land.
3. The Plan should avoid development within migration routes of CTS to avoid significant impacts. Mitigation Measure 3.2.3-10 of the SEIR is inadequate to avoid CTS mortality and Impact 3.2.3-10 is significant and unavoidable. The SEIR discusses roadway islands as being barriers to CTS migration but neglects to discuss barriers resulting from roadside gutters and mortality of CTS from entering and dying in storm drains located along roadsides. A female CTS was trapped

III. COMMENTS AND RESPONSES

RESPONSE 1

The Southwest Santa Rosa Redevelopment Plan Draft Subsequent EIR (SEIR) incorporates by reference the 1994 Southwest Area Plan EIR (page 2, *Introduction*). This includes the discussion of potential impacts and mitigation measures respecting the tiger salamander as addressed in the Area Plan EIR. Mitigation measures for the tiger salamander are also discussed on page 3.2.3-36 of the Redevelopment Plan SEIR.

Area Plan EIR mitigation measures which would reduce the significance of impacts to the tiger salamander are discussed under Impact and Mitigation Measures 3.2.3-3c, 3.2.3-4, 3.2.3-7, and 3.2.3-10 in section 3.2.3, *Vegetation and Wildlife*. The third paragraph of Impact 3.2.3-7 on page 3.2.3-30 reads, in part: "Eggs of this species (CTS) were found at several locations not currently planned for development. No tiger salamanders nor their larvae were found in any other aquatic habitats on designated project sites within the Southwest Plan Area".

The statement in the comment that the U.S. Fish and Wildlife Services has not made a final ruling for the Santa Rosa population of CTS is correct.

RESPONSE 2

In 1994, information on the occurrence of the California tiger salamander (CTS) within the Southwest Plan Area was gathered from the California Department of Fish and Game's (CDFG) California Natural Diversity Data Base (CNDDB), reports prepared by biologist Charles Patterson, and discussions with CDFG biologists. Information contained in the CNDDB is reliant upon and limited to information obtained from historic collection records and brought up to date by voluntary submissions of data by, agency personnel, biologists, consultants, and informed members of the public. Anyone with reliable data on the occurrence of special status species is encouraged to report these occurrences to the CNDDB. No record of the occurrence of CTS at Southwest Community Park is contained in the current CNDDB (according to information dated 1/5/00), nor did information on the occurrence of CTS at Southwest Community Park come forth during agency and public review of the 1994 Area Plan EIR.

However, the 1995 Hearn Avenue Reconstruction and Improvement Project EIR does contain information provided by the CDFG on the occurrence of a known CTS breeding pond at Southwest Community Park. EIP has confirmed this occurrence with the CDFG and a symbol showing the presence of the CTS at Southwest Community Park has been added to SEIR Figure

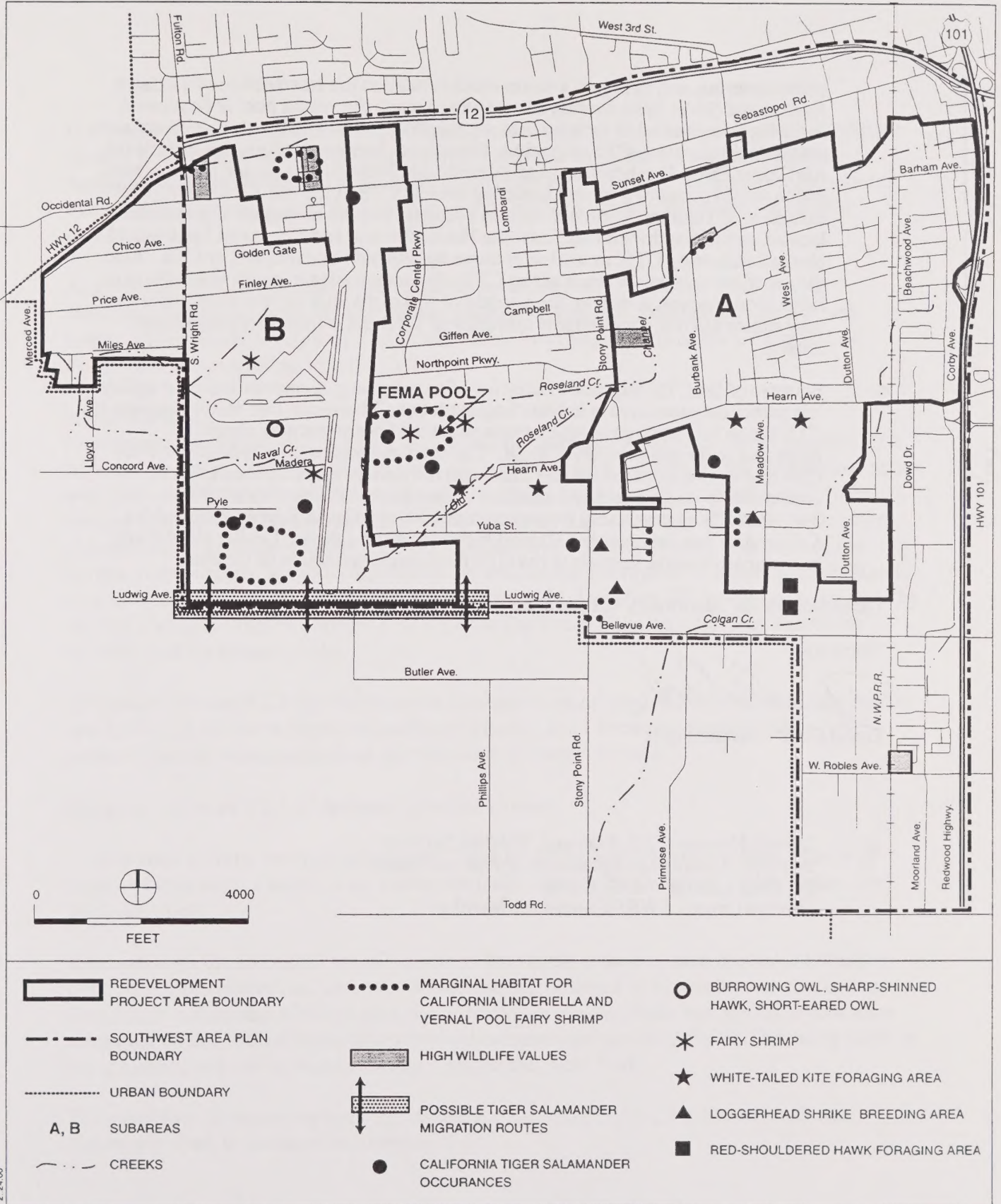
3.2.3-3, *Wildlife Occurrence Locations.*

There are no known plans to develop the park site. Since 1995, houses have been constructed on former agricultural land west and south of Southwest Community Park, and housing construction is currently ongoing. This further reduces the amount of upland aestivation habitat available to the salamander. To the east, the park is surrounded by fallow agricultural land. In discussions with CDFG, consideration is being given to setting aside and protecting an approximate 70-foot wide corridor under the high voltage power lines adjoining the property to the east as upland habitat for the salamander. The CDFG reports that salamanders may utilize rodent burrows in a large dirt pile on the park site as aestivation habitat. The park is considering fencing to protect salamander breeding habitat and to prevent salamanders from falling off curbs into the adjacent roadways. The CDFG recommends the construction of a raised walkway in the southwest corner of the park with a curb on the pond side to divert salamanders, and buried lengths of 2-inch diameter PVC (plastic) pipe laid under and perpendicular to the walkway to provide access to upland burrowing habitat.

RESPONSE 3

In 1995, the Phase I Final Report: *Santa Rosa Plain Vernal Pool Ecosystem Restoration Plan* was prepared for the Santa Rosa Plain Vernal Pool Task force. All but one of the CTS occurrences shown in SEIR Figure 3.2.3-3 re located in known vernal pool or wetland areas shown on SEIR Figure 3.2.3-2. Because CTS breed in vernal pools, measures which would protect listed plant species will protect CTS as well.

In July 1998, the U.S. Fish and Wildlife Service (USFWS) issued a biological opinion regarding the affects on four federally listed endangered plant species (File Number 22342N). This document resulted from 404 permit issuance consistent with programmatic consultation. The biological opinion was prepared pursuant to Section 7 of the Endangered Species Act of 1973, as amended (act), and 50 CFR 402 of USFWS regulations governing Section 7 of the Act. The purpose of this programmatic consultation document is to expedite formal consultations, on a project-by-project basis, for limited effects to listed species in seasonal wetlands and to outline a comprehensive conservation program that would address affects to the listed species resulting from 404 permit issuance for fill of seasonal wetlands throughout the Santa Rosa Plain. The USFWS will reevaluate the effectiveness of this programmatic consultation document on the Santa Rosa Plain at least every six months. Although this biological opinion is focused on listed plant species, occurrences of CTS coincide with occurrences of Sebastopol meadowfoam and Baker's blennosperma (Sonoma sunshine) in the southwest portion of the Southwest Santa Rosa Plan Area. Measures which would protect listed plant species will protect CTS as well. Potential affects to the CTS would be addressed through individual consultation, when necessary. Elements of this programmatic biological opinion will be incorporated into a new Section 404 Regional General Permit (RGP).



SOURCE: EIP Associates

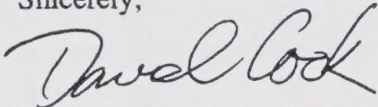
SOUTHWEST SANTA ROSA REDEVELOPMENT PLAN
FIGURE 3.2.3-3: WILDLIFE OCCURRENCE LOCATIONS

4 before entering, and dying, in a storm drain located at the intersection of Tuxhorn Avenue and Silver Spur Avenue attempting to reach the vernal pool at Southwest Park. Housing and other structures along migration routes will be a significant and unavoidable impact to CTS migration. Significant barriers to migration include the Air Center Phase II subdivision and extension of Fresno Avenue and storm drains, which would bisect two known breeding sites of CTS at the old Air Center. The extension of Tuxhorn Avenue to Dutton Meadow and development of grasslands located east of Southwest Park between Hearn Avenue and Constants Lane would obstruct migrating CTS, as well as remove upland habitat occupied by CTS. Also, the use of tunnels below roads along CTS migration routes to avoid road kills is an interesting concept, however, the success of this technique has not been proven and may reduce but will not eliminate mortality of CTS and is therefore a significant impact.

- 5 4. Because of the CTS' migration behavior of moving long distances and poor agility, it is particularly sensitive to habitat fragmentation. Therefore, cumulative impacts to CTS due to habitat fragmentation throughout the Southwest area should be addressed in the program-level SEIR. The reconnaissance level field surveys for CTS that were conducted for this SEIR and the Southwest Area Plan EIR are inadequate to assess direct and cumulative impacts to CTS and their habitat. Focused CTS surveys using Department of Fish and Game Survey Protocol for California Tiger Salamanders (Inland Fisheries Informational Leaflet No. 44) are necessary to analyze impacts to the CTS from implementation of the Plan.

Thank you for the opportunity to comment.

Sincerely,



David Cook - Herpetologist

cc Dwight Harvey - U. S. Fish and Wildlife Service
Bill Cox - California Department of Fish and Game
Dr. Brad Shaffer - U. C. Davis
Carolyn Dixon - SWRP Committee Member

U.S. Army Corps of Engineers (Corps) districts have begun to finalize their regional conditions for new and modified nationwide permits (NWP) to become effective on June 7, 2000. Regional conditions will provide additional protection for the aquatic environment by ensuring that the NWPs authorize only those activities with minimal adverse affects on the aquatic environment.

As proposals for development of individual project sites in the Southwest Plan Area are submitted for development, the acreage and location of wetlands, contiguous habitats, and buffers which would be required to maintain viable local populations of the CTS would be determined in consultation with the CDFG.

RESPONSE 4

Redevelopment Plan SEIR Figure 3.2.3-3, *Wildlife Occurrence Locations*, shows possible CTS migration routes extending north and south of Ludwig Avenue between South Wright road on the west and west of Stony Point Road to the east. Ludwig Avenue is the southern limit of the western portion of the Southwest Santa Rosa Plan Area. Low density residential development and open space has been proposed for two areas north of Ludwig Avenue, with most of the area to remain open space. Any development in the area would be required to adhere to the mitigation measures in the Redevelopment Plan SEIR, and the 1994 Area Plan EIR which were reviewed by the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), and the general public.

Mitigation Measure 3.2.3-10, which would incorporate under-road culverts for tiger salamanders into the design of new or improved roadways adjacent to all known wetlands would avoid potential barriers to migration from the extension of Fresno Avenue.

Mitigation Measure 3.2.3-10 has been amended to read:

“Under-road culverts for tiger salamanders shall be incorporated into the design of new or improved roadways adjacent to all known wetlands where salamander migration routes have been identified.”

Information on the successful use of tunnels by the closely related eastern spotted salamander (*Ambystoma maculatum*) in Amherst, Massachusetts, contained in Appendix A to this document. Based upon the success of this project, the construction of salamander tunnels under roadways separating upland habitat from eastern tiger salamander (*Ambystoma tigrinum*) breeding ponds is being planned at a site in Nassau County, Long Island, New York.

The possibility of preserving upland grassland habitat occupied by CTS east of Southwest Community Park is discussed in Response 2.

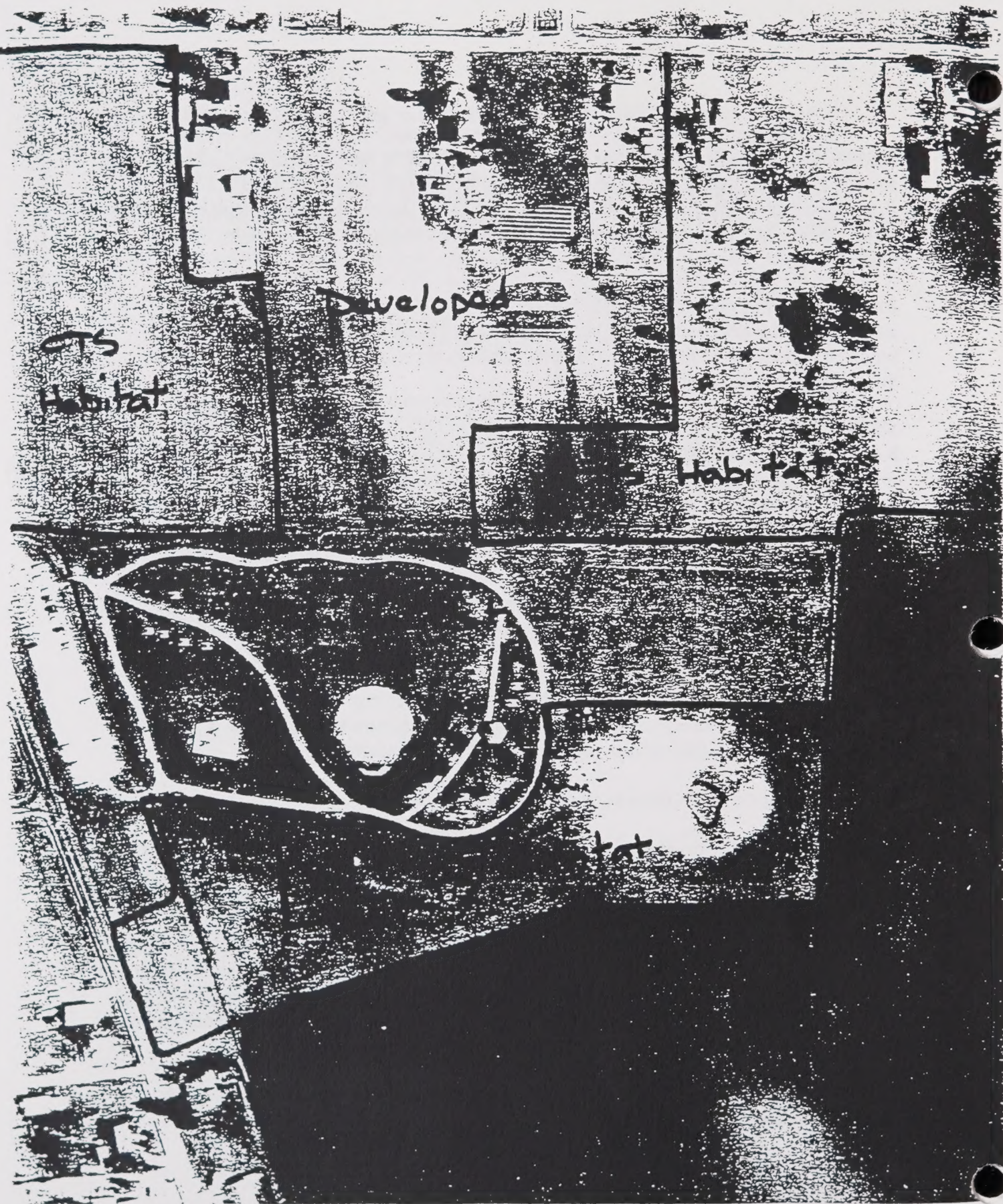


Figure 1: Potential California Tiger Salamander Habitat at or adjacent to Southwest Community Park, Santa Rosa.

RESPONSE 5

The reconnaissance level field surveys for CTS that were conducted for the Redevelopment Plan SEIR were to verify and determine where CTS occur in the Plan Area. The studies concluded that no CTS nor their larvae occur in any other aquatic habitats on designated project sites (sites currently planned for development), within the Southwest Plan Area (see Response 1). However, concern about the effects of cumulative impacts on CTS due to habitat fragmentation is valid. See Responses 1 and 3 regarding CTS mitigation.

It should be noted that the 1994 Area Plan EIR was prepared to address the site-specific impacts associated with 35 individual land use proposals and several infrastructure projects. As stated on page 13 of the Southwest Area Plan, proposals for the development of other sites will be subject to separate environmental review under CEQA. The cumulative impacts associated with the development of these sites has been addressed in the Area Plan EIR, however, site specific impacts for new projects will need to be determined on a case by case basis as they come on board.. Environmental review for each project would include focused CTS surveys conducted according to CDFG protocol where appropriate to the existing environmental conditions of each site.

These are
very rough
still & incomplete
but so far, it
seems to be
the direction
I'm taking
-ch-

Carolyn Dixon 1027 Leddy Ave. Santa Rosa, Ca. 95407

30 March 2000

Draft Comments to date: Southwest Redevelopment Plan

These comments do date do not address traffic, crime, Air quality, noise, hazmat, visual and other issues, yet.

With regards to the Supplemental EIR:

Impact 3.2.3-1 states significant impacts to Valley oaks and regeneration in natural setting.

Impact 3.2.3-2 states significant impacts to Valley-Foothill Riparian Woodland and a loss of 5-10 acres.

Impact 3.2.3-3 states significant loss of wetland habitat and vernal pools.

Impact 3.2.3-4 states significant impacts to existing hydrological characteristics of vernal pool systems extending west to the Laguna de Santa Rosa and southwest to the Todd Road vernal pool preserve. This includes pollution, siltation and downstream flooding. In fact, existing neighborhoods within the study area are downstream of proposed development. they include the Leddy Park and South Wright neighborhoods.

Impacts 3.2.3-5 states significant impacts as a result of increased numbers of exotic plant invasions as a result of grading and disturbance.

Impact 3.2.3-6 states Potentially significant to sensitive birds through loss of foraging habitat.

Impact 3.2.3-7 states significant impacts to threatened and endangered plants and animals through loss and damage of whole communities.

Impact 3.2.3-8 states significant impacts to water quality in creeks and intermittent drainages.

Impact 3.2.3-9 states potentially significant impacts to nesting birds by abandonment and/or the loss of reproductive effort.

Impact 3.2.3-10 states significant impacts to wildlife migration through disruption and mortality.

6 Only two of these impacts are listed as potentially significant, the rest are considered significant. Even though the plan claims to be able to reduce impacts to insignificant, cumulatively the area suffers a tremendous loss, additionally, no solitary bee pollination studies have been performed and, a population of 13 salamanders were identified at the Southwest community park that were not identified in the EIR.(fig.2.2.3-3)

7 No further loss of groundwater recharge area should be allowed. Particularly in light of the Sonoma County Water Agency's dilemma regarding the proposed Eel River diversion. Protection should not be exempt from funding.

Page 3.2.3-36 summarizes that "The Housing Program provides assistance to build, improve, and preserve low and moderate income housing. Redevelopment financing for these activities would not impact biological resources within Redevelopment Areas A or B, but could generate impacts to biological resources through the stimulation of development within Redevelopment Subareas of A or B, or the Southwest Plan Area as a whole. Therefore, the discussion of biological resources impacts and mitigation measures as

RESPONSE 6

Cumulative impacts are discussed in each technical section of the EIR (i.e., *Traffic and Circulation*, *Visual Quality*), where cumulative impacts are identified. The unavoidable, significant adverse impacts are summarized in section 5, *Unavoidable, Significant Adverse Impacts*. The unavoidable impacts include Level of Service E or worse conditions on U.S. 101 during the PM peak hour, significant changes in visual conditions within central to south and west portions of the Southwest Plan Area, loss of grassland foraging area for sensitive bird species, and increased traffic noise affecting existing land uses. These are all cumulative impacts which cannot be avoided.

With respect to bee pollination, refer to the discussion regarding agricultural land uses in the Southwest Plan Area as explained on page 3.1.2-11 in section 3.1.2, *Land Use*. Active crop production or other agricultural land uses within the Southwest Plan Area are notably lacking, particularly within Redevelopment Subareas A and B which are considered 93% urbanized.

See also Responses 1 through 5 regarding the tiger salamander.

RESPONSE 7

Groundwater recharge is discussed on pages 3.2.2-16 and 3.2.2-17 in section 3.2.2, *Hydrology and Water Quality*. The use of stormwater detention basins and ponds to assist in groundwater recharge is described on page 3.2.2-17. See also Mitigation Measure 3.2.2-1 regarding the reduction of impervious surfaces included in new development

addressed under the Development Assistance Program would apply equally to the Housing Program."

8

With regards to the Redevelopment Plan itself, there is inconsistency in language regarding scenic, historic, aesthetic, and natural amenities.

Therefore I would request that that language be added as Item L. on page 3.

-On page 4 item 10 add preservation of scenic, historic aesthetic and natural features.

-On page 12 as item 10, add natural features

-On page 13 J. 1. add natural features to buildings of historic or architectural significance.

-On page 17 add natural areas to the first paragraph

-On page 19, item 6, add creek setbacks and natural areas to "outdoor areas not permitted to be covered by buildings"

-On page 21, first paragraph add to: "Therefore such plans shall give consideration to good design, openspace, and other amenities to enhance the aesthetic (and biological) quality of the Project Area.

-On page 26 item G. add scenic, aesthetic and natural to "preservation of any historical sites"

I am concerned that in our effort to eliminate the blight created in the past, we may be creating more blight for the future.

If the "solution to pollution is dilution" is true, and I believe it is to some extent, then allocation of funds for openspace is as important as the physical act of abatement against blight.

RESPONSE 8

The comment addresses items regarding the Redevelopment Plan, not the adequacy of the Draft Subsequent EIR. No response regarding the EIR is necessary.

SIERRA CLUB---SONOMA COUNTY GROUP

Comments on EIR for the Southwest SR Redevelopment Plan

IMPACTS

3.2.2-2 Detention basins on ponds

City should ~~do~~ more than "encourage"---this is not a certain solution

3.2.3-1 Impacts to oaks shall be avoided "whenever possible."

This is not a high enough standard.

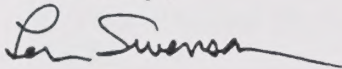
3.2.3-3 Impacts to wetland resources shall be "avoided or minimized." Not good enough.

3.2.3-7 "Avoidance" of wetlands impacts to threatened or endangered species and their habitat, This is not a high enough standard. There should be no wetlands impacts to these species.

3.2.3-10 Relocation of vernal pools---severe penalties should result from non-environmentally sensitive relocation of these pools.

In general, there isnt enough emphasis on penalties if protections are not sustained.

Sincerely,



Len Swenson

On behalf of the Executive Committee

RECEIVED

APR 10 2000

City of Santa Rosa
Housing and Redevelopment

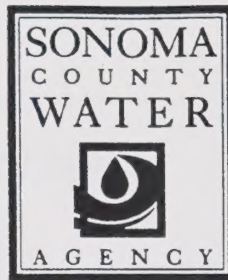
RESPONSE 9

See Response 7 regarding detention basins. Regarding wetlands, refer to the letter from the California Department of Fish and Game dated April 17, 200, top of page two entitled *Wetland Mitigation*. The Department concurs with the recommended mitigation measures for wetlands.

Basically, the commentor appears to be asking for more strict standards in the mitigation of identified impacts on biological resources. Mitigation as required by law or is otherwise reasonable and practicable for the identified impacts to biological resources is explained in section 3.2.3, *Biological Resources*. The mitigation measures explained in the EIR are fully enforceable through permit conditions, agreement, or other binding instruments.

RESPONSE 10

Please see Response 9.



RECEIVED

APR 10 2000

City of Santa Rosa
Housing and Redevelopment

FILE: FDR/TENT/SOUTHWEST SANTA ROSA
REDEVELOPMENT PLAN, DRAFT SUBSEQUENT EIR

April 6, 2000

Stephen F. Burke
City of Santa Rosa, Department of Community Development
100 Santa Rosa Avenue
P.O. Box 1678
Santa Rosa, CA 95402-1678

RE: SOUTHWEST SANTA ROSA REDEVELOPMENT PLAN, DRAFT SUBSEQUENT EIR

Dear Mr. Burke:

The Sonoma County Water Agency (Agency) has reviewed the above mentioned project. In response the Agency submits the following responses to your questions:

11 All of the below comments refer to the Southwest Santa Rosa Redevelopment Plan, Draft Subsequent EIR. Edits are either underlined inserts or ~~strikeout~~ deletions.

1. The Draft Subsequent EIR should be consistent and refer to the Sonoma County Water Agency as either "Agency" or "SCWA" throughout the document.
2. Page S-4, fourth bulleted item; and Page 2-18, third paragraph: Reference to Naval Creek should be deleted. The Agency does not own right-of-way on Navel Creek and has no responsibility for maintenance.
3. Page 3.1.5-1, fourth paragraph, second sentence: "The City's agreement with the Agency allows for a total maximum monthly ~~withdrawal~~ delivery..."
4. Page 3.1.5-1, fourth paragraph, third sentence: The statement that "the City's current average daily demand is 21 mgd, or 42% of its maximum daily delivery entitlement" is misleading because the City of Santa Rosa had a peak month demand of greater than 31 mgd in 1999. The EIR should include average daily peak month information for Santa Rosa.
5. Page 3.1.5-2, second paragraph: "In contrast to conditions present during the preparation of the Southwest Area Plan EIR in 1994, the SCWA has been finding it increasingly difficult to satisfy the demands of its users during the peak months (June, July, August, and September) of water use in recent years. ~~(June and August, with July 15 through August 15 typically being the Peak 30 day period)~~. The SCWA's customers other than the City of Santa Rosa include the cities of Petaluma, Rohnert Park, Cotati, and Sonoma; the Forestville, Valley of the Moon, and North Marin Water districts; and the communities of Larkfield, Kenwood, Forestville Windsor, and Penngrove; on a less frequent basis Windsor and Southern Marin County; and the Citizens Utilities Company of California Larkfield District, Kenwood Water Company, Penngrove Water Company, and Lawndale Mutual Water Company. In addition, the District SCWA sells

RESPONSE 11

The edits as provided in letter from the Sonoma County Water Agency have been incorporated into the Draft SEIR. The following additional points are noted:

- Item 4. The following is added after the first sentence in the first paragraph on page 3.1.5-2 of the Draft SEIR..

“According to the City of Santa Rosa Utilities Department, (*1999 Production and Use Statistics*), the average daily demand for the peak months of June, July, August and September 1999 was 28.4 mgd, 30.9 mgd, 29.9 mgd and 25.7 mgd. respectively.”

- Items 15, 16 and 18. At this time, the City of Santa Rosa Utilities Department does not have any peak month water use projections for future years that are considered valid. The Utilities Department is currently developing projections regarding potential peak month future water use. (Source: Virginia Porter, Water Conservation Manager, City of Santa Rosa Utilities Department, telephone and E-mail communications of May 4, 2000.) Water use as noted in the text of the Draft SEIR refers to average annual consumption. The subject title on page 3.1.5-9 is changed to read:

“Average Annual Water Supply and Distribution”

water wholesale to the Marin Municipal Water District. With the recent listing of ~~two~~ three endangered species, Coho and Chinook ~~Salmon~~ and Steelhead ~~Trout~~ in the Russian River, the SCWA is not able to increase the rate of withdrawal from the Russian River to satisfy increasing demands of its users without first going through completing a Section 7 Consultation, the U. S. Fish and Wildlife Services' (USFWS) endangered species assessment, in cooperation with the National Marine Fisheries Service and U. S. Army Corps of Engineers. The Agency is presently engaged in a Section 7 Consultation with ~~the USFWS~~ these two entities."

6. Page 3.1.5-2, third paragraph: "The ~~Agency~~ SCWA is currently permitted to ~~withdraw~~ divert/divert up to 75,000 acre-feet (AF) per year from ~~its sources~~ the Russian River and it currently delivers about ~~65,000~~ 60,000 acre-feet of water to its customers annually, ~~up from 56,000 acre feet in 1998.~~ Officials of the SCWA have ~~projected~~ determined that ~~the~~ its current delivery reliable production capacity of 84 mgd will be all the water that will be available out of the Russian River until ~~a lawsuit against the Agency's Water Supply EIR is resolved and the Section 7 Consultation is completed.~~ Collector No. 6 is constructed and operational. Additional water supply capacity needed to meet future demands identified in the SCWA's Water Supply and Transmission System Project (WSTSP) cannot be constructed until the lawsuit on the WSTSP EIR and the Section 7 Consultation are resolved. If the resolutions support the ~~Agency's~~ SCWA's proposed Wwater Ssupply Pplan, ~~then~~ it could still be up to 10 years before additional water beyond the present allocations would be available to the SCWA system and buildout under the ~~subregion's~~..."
7. Page 3.1.5-3, starting on the top line: "...~~Agency's~~ SCWA's proposed Wwater Ssupply Pplan, then it may be difficult ultimately to increase water supply beyond current authorized capacity. In this scenario, water supply would become a constraint on development within the next ten years for the SCWA's subregion water contractors. The responses that such a constraint would play could ~~would~~ range from increasing storage capacity to meet peak demand..."
8. Page 3.1.5-3, paragraph 1, first sentence: This sentence is redundant and should be either deleted or revised as discussed in Item 5, above.
9. Page 3.1.5-3, paragraph 1, second sentence: "The current system-wide demand from all of the SCWA users during the peak months can go up to ~~110~~ 93 mgd, and overage of ~~38%~~ approximately 11%..."
10. Page 3.1.5-3, paragraph 1, third sentence: The following sentence is incorrect because there is currently a constraint on the Agency's water production capacity. "~~Thus, the month or two of peak demand annually illuminates a current system wide storage problem, not a deficiency in the absolute quantity of available water supply annually relative to existing demand and development.~~"
11. Page 3.1.5-3, paragraph 2, first sentence: "...~~Agency's~~ SCWA's water ~~delivery~~ and ..."
12. Page 3.1.5-3, paragraph 2, second sentence: "... ~~delivery~~ and ..."
13. Page 3.1.5-3, paragraph 2, third sentence: "To address this current, ~~and potentially temporary~~ water supply constraint, the Board of Directors has authorized Agency staff to negotiate with its water contractors and customers to develop a ~~consensual solution~~ consensus..."
14. Page 3.1.5-3, paragraph 3, first sentence: "...both in the ~~medium term~~ of the next 5-10 years..."
15. Page 3.1.5-3, paragraph 3 (continued on Page 3.1.5-4): The City of Santa Rosa's statement that "water demand for a population of 180,000 residents expected in 2010 is between 33.5 and 34.5 mgd, an increase if approximately 62% over its current daily usage of 21 mgd, but well within its 50 mgd maximum daily delivery entitlement" is misleading. The projected water demands are not peak month projections, which is

Note: This page is intentionally left blank in order to maintain the sequence of response pages facing comment pages.

the period that limits the water supply system. The City of Santa Rosa had a peak month demand of greater than 31 mgd in 1999. The EIR should include peak month projections and compare this value with their 50 mgd maximum daily delivery entitlement.

16. Page 3.1.5-9, Impact 3.1.5-1: The impact statement refers to "1.1 mgd" and "6.7 mgd". Please specify if these values are averages and for what time period (i.e. peak monthly, annually, etc.). Also, in the second sentence "the City's current use of 21 mgd" is misleading for the same reasons discussed in Item 15, above.
17. Page 3.1.5-9, Impact 3.1.5-1, paragraph 2, first sentence: "...over 30 mgd on average in the peak a day month from the SCWA."
18. Page 3.1.5-9, Impact 3.1.5-1, paragraph 2, second sentence: The City has projected that the water demand in 2010 would be approximately 34 mgd. The Agency considers this projection low because the City's current average daily peak month is over 30 mgd. Please justify your formulation of 34 mgd and include a projection of the average daily peak month in 2010. These projections should then be compared with the City's entitlement of 50 mgd.
19. Page 3.1.5-10, paragraph 2, third sentence: "In addition to ~~the Sonoma County Water Agency is~~ investigating Russian River withdrawal options for a long term water supply the Sonoma County Water Agency plan, including is also investigating the use of recycled reclaimed water to offset potable water use. Implementation of conservation measures and additional water storage geared to increasing the overall water supply are key components of the SCWA's water supply plan."
20. Page 3.2.2-3, second paragraph: "The Sonoma County Water Agency (SCWA) is responsible for ~~most~~ some of the maintenance..." Within the project area, the Agency has flood control maintenance responsibilities for Roseland Creek Channel from Burbank Avenue to Ludwig Avenue, Colgan Creek from Highway 101 to Bellevue Avenue, and Moorland Channel south of West Robles Avenue to Todd Road.
21. Page 3.2.2-10, fifth bullet: "The Sonoma County Water Agency reviews ~~must approve~~ project plans for all proposed on-site drainage systems, as well as for all new or upgraded facilities that may be required off-site within the City of Santa Rosa." The Agency does not "approve" project plans, but reviews for conformance with our Flood Control Design Criteria. Also, the Sonoma County Permit and Resource Management Department reviews project plans in unincorporated areas of the county.
22. Page 3.2.2-15(16), Mitigation Measure 3.2.2-1 (b), second sentence: "...design storm runoff, in cooperation with ~~under the direction of~~ the Sonoma County Water Agency."
23. Page 3.2.2-16, Mitigation Measure 3.2.2-1 (c), first sentence: "...Southwest Area Plan should be undertaken with review by ~~the approval of~~ the Sonoma County Water Agency."
24. Page 3.2.2-16, Mitigation Measure 3.2.2-1, "Monitoring"; Page 3.2.2-17, Mitigation Measure 3.2.2-2, "Monitoring"; Page 3.2.2-21, Mitigation Measure 3.2.2-3, "Monitoring"; and Page 3.2.2-22, Mitigation Measure 3.2.2-4, "Monitoring": Mitigation measures and monitoring should be prepared and conducted in coordination with the Agency, however monitoring is the sole responsibility of the City of Santa Rosa and not the Sonoma County Water Agency.
25. Page 3.2.2-23, "Notes - Hydrology and Water Quality":
 - Item 4 - "...Wadsworth, Assistant Civil ~~Associate~~ Engineer..."
 - Item 6 - "W. R. Stillman ~~Spillman~~"
 - Item 9 - The Agency has the following comments regarding the Rational Formula:

RESPONSE 12

a) The rational runoff method predicts peak runoff rates based on the assumption that a rainstorm of uniform intensity covers the whole basin. The rainfall intensity value is a good working representative number for the entire Southwest Santa Rosa Redevelopment Area.

b) The 1994 Area Plan EIR estimates the expected change in impervious area by making a broad assumption for site coverage for each particular land use category and comparing the existing land uses with the proposed land uses. The overall land use projections and associated percentages of impervious area were based on the 1994 Area Plan EIR. The total estimated impervious area, 1856 acres, was calculated by combining each of the respective impervious areas associated with each land use category. The conservative estimate of 1856 acres of impervious surfaces corresponds to 49% of the total 3,800 acres originally included within the Southwest Plan Area. Because the current redevelopment area comprises approximately 2,006 acres, a smaller portion of the original Southwest Plan Area, the total impervious area pertaining strictly to this portion is 984 acres based on the conservative assumption that 49% of this area would be covered by impervious surfaces.

c) Based on the Sonoma County Water Agency (SCWA) Flood Control Design Criteria Plate No. B-4, the "K" factor should correspond to the mean seasonal precipitation rather than average rainfall intensity. As indicated by the SCWA, because the average annual rainfall for the project area is approximately 30 inches the associated K factor should equal 1.0.

d) The peak surface runoff estimate of 1,972 cfs presented on page 3.2.2-14 was based on the larger Plan Area as defined by the 1994 Area Plan EIR, and used a "K" factor value of 1.23. By reducing the area of consideration to only include the 2,006 acres included within the current redevelopment area and by correcting the "K" factor the peak surface runoff should equal 850 cfs [$Q = (0.9)(0.96)(984)(1)$].

The peak surface runoff estimate for the larger Southwest Plan Area is revised to equal 1,604 cfs on page 3.2.2-14 of the Draft EIR [$Q = (0.9)(0.96)(1,856)(1)$].

- a) The intensity (I) is equal to 0.96 for a 25-year storm of a 1-hour duration, but the intensity varies throughout the watershed. This particular intensity can only be used at one location in a given watershed.
- b) The impervious area of 1856.1 acres seems very high to the Agency. Please justify your estimated value for the area.
- c) The "K" factor is used to adjust the Rational Formula to the local condition relative to the average annual rainfall. The factor has nothing to do with rainfall intensity. In this case, the average annual rainfall is about 30-inches per year which makes "K" = 1.
- d) The surface runoff of 1972 cfs presented on page 3.2.2-14, second paragraph, should be recalculated using the above information.

26. The Agency requests the opportunity to review environmental documents and civil design plans for the subject project when they become available.

Please direct future correspondence for this project and all other environmental documents to the attention of William Keene, AICP, Principal Environmental Specialist, Sonoma County Water Agency.

Thank you for the opportunity to comment. If you have any questions I can be contacted at (707) 547-1944.

Sincerely,



David Cook
Environmental Specialist

c Bob Oller

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United States Department of the Interior
Fish and Wildlife Service

Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

RECEIVED

APR 14 2000

City of Santa Rosa
Housing and Redevelopment

IN REPLY REFER TO:

1-1-00-TA-1276

April 7, 2000

Ms. Marjorie Jackson
Senior Administrative Assistant
City of Santa Rosa
P.O. Box 1086
Santa Rosa, California 95402

Subject: Southwest Santa Rosa Redevelopment Plan, City of Santa Rosa, Sonoma County, California

Dear Ms. Jackson:

13 | This regards the March 2000, Draft Subsequent Environmental Impact Report for the proposed Southwest Santa Rosa Redevelopment Plan (redevelopment plan), which was received in our office on March 13, 2000. The U.S. Fish and Wildlife Service (Service) has reviewed the redevelopment plan, and believes the proposal has elements which may result in adverse impacts to federally listed species. The Santa Rosa Plains are known to support many federally listed species which are protected under the Endangered Species Act of 1973, as amended (Act). Such species include the endangered Burke's goldfield (*Lasthenia burkei*), Sonoma sunshine (*Blennosperma bakeri*), and the candidate California tiger salamander (*Ambystoma californiense*).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures. If a Federal agency is involved with the permitting, funding, or carrying out of the project, then initiation of formal consultation between that agency and the Service pursuant to section 7 of the Act is required. Such consultation would result in a biological opinion addressing the anticipated effects of the project to the listed species and may authorize a limited level of incidental take. If a Federal agency is not involved in the project, and federally listed species may be taken as part of the project, then an incidental take permit pursuant to section 10(a)(1)(B) of the Act would need to be obtained. The Service may issue such a permit upon completion of a satisfactory conservation plan for the listed species that would be affected by the project.

The redevelopment plan outlines goals and objectives for the development of residential, commercial, institutional, and open space in southwestern Santa Rosa. The plan covers approximately 3,800 acres located west of highway 101 and south of highway 12. Considering the potential adverse impacts to federally listed species, the Service supports the No Project Alternative.

RESPONSE 13

The DSEIR addresses the occurrence of four federally listed endangered plant species within the Southwest Santa Rosa Plan Area: Baker's blennosperma=Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), Sebastopol meadowfoam (*Limnanthes vinculans*), and many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*), and the California tiger salamander (*Ambystoma californiense*). The occurrence in the Plan Area of the vernal pool crustacean California linderiella (*Linderiella occidentalis*) was considered also. Occurrences of sensitive species of plants and wildlife are shown on Redevelopment Plan SEIR Figure 3.2.3-2 and Figure 3.2.3-3. Redevelopment Plan SEIR Impacts and Mitigation Measures 3.2.3-3a and -3b, 3.2.3-4, and 3.2.3-7 would reduce impacts to these species and their habitat to an insignificant level.

For further reference, the USFWS is preparing a draft of the Central Valley Vernal Pool Multiple Species Recovery Plan, which addresses recovery for multiple species including the four listed plant species on the Santa Rosa Plain.

Ms. Marjorie Jackson

2

14

As stated previously, implementation of the proposed redevelopment plan will require incidental take authorization either through section 7 or 10 of the Act. If you have any further questions, please contact Don Hankins or Kenneth Sanchez at (916) 414-6625.

Sincerely,

Karen J. Miller
for

Karen J. Miller
Chief, Endangered Species Division

RESPONSE 14

Incidental take is discussed in the 1998 USFWS Section 7 biological opinion referenced in Response 3.



DEPARTMENT OF FISH AND GAME

<http://www.dfg.ca.gov>

POST OFFICE BOX 47

YOUNTVILLE, CALIFORNIA 94599

(707) 944-5500

April 17, 2000

CITY OF SANTA ROSA
P.O. Box 1678
Santa Rosa, CA 95402

APR 19 2000

**DEPARTMENT OF
COMMUNITY DEVELOPMENT**

Ms. Sonia Binnendyk
City of Santa Rosa
Department of Community Development
100 Santa Rosa Avenue
Post Office Box 1678
Santa Rosa, California 95402-1678

Dear Ms. Binnendyk:

Draft Subsequent Environmental Impact Report (EIR)
Southwest Santa Rosa Redevelopment Plan
SCH Number 1999102091
Santa Rosa, Sonoma County

Department of Fish and Game personnel have reviewed the Draft Subsequent EIR for the Southwest Redevelopment Plan and offer the following comments and recommendations.

Water Supply & Distribution Mitigation (3.1.5-1)

15 Mitigation listed-above recommends to continue to develop alternative sources of water and storage/conveyance facilities, including reactivating unused wells, developing new wells, and increasing storage capacity. The area is water poor and existing wells in the project area will not provide a source. If the program considers underground storage and reuse, there could be significant issues for wildlife related to changing water tables and negative impact on oaks and other trees. Reclaimed water use would be acceptable as long as its use is not allowed to adversely affect vernal pools and swales and oaks.

Tree and Habitat mitigation (3.2.3-1 and 3.2.3-2)

The Department supports adoption of the proposed mitigation measures for trees, shrubs, and other wildlife habitat.

Conserving California's Wildlife Since 1870

RESPONSE 15

Mitigation Measure 3.1.5-1 on page 3.1.5-10 in section 3.1.5, *Utilities*, describes the City of Santa Rosa's current work in preparing an Interim Water Supply Plan to deal with the issue of both short and long term water supply. It is noted that the City is continuing to develop alternative sources of water and storage/conveyance facilities, including reactivating unused wells, developing new wells, and increasing storage capacity to meet peak water needs. Any major water supply and/or distribution facility as a result of this program would require separate environmental review under CEQA. Such environmental review would not preclude addressing the potential impacts to biological resources as noted in the comment.

Wetland Mitigation (3.2.3-3)

16 The Department concurs with the recommended mitigation measures for wetlands. While avoidance of impacts is a first priority in mitigating project impacts, avoidance in the absence of adequate buffers and adequate associated upland habitat can result in degradation of the functions and values of the wetland. Projects proposing to avoid wetlands should be carefully reviewed by the agencies to determine if and how avoidance will maintain the future viability of the wetlands before they are approved. In some instances, it may be preferable to consider off-site mitigation instead of avoidance if the long-term maintenance of the wetlands functions and values cannot be assured.

17 To assure that avoidance mitigation is effective, all avoided wetlands must be preserved in perpetuity through dedication of conservation easement or fee title to an appropriate agency or organization with experience in managing sensitive habitats. As part of the dedication, an endowment or other suitable funding mechanism must be provided to assure long-term management and maintenance.

Projects adversely affecting State-listed endangered species and their habitat will require a permit as prescribed in Section 2081 of the Fish and Game Code.

18 The planning area supports habitat for the California tiger salamander (CTS) (*Ambystoma tigrinum*), a species of special concern and a Federal candidate for listing as threatened and endangered. Loss of habitat, both breeding and estivation, is considered by the Department to be a significant impact as described in Section 15380 of the California Environmental Quality Act (CEQA) Guidelines. No mitigation for impacts to CTS is identified in the Subsequent EIR. The Department recommends that the Subsequent EIR be revised to reflect impacts to CTS and that these impacts be mitigated by preservation of occupied habitat at a 1:1 ratio. This would include protection of both breeding and associated upland estivation habitat.

19 **Impact 3.2.3-4: Hydrological characteristics of vernal pool/swale systems could be altered by construction.** The mitigation measure (3.2.3-4) addresses sediment and pollution but does not answer the question of modified hydrology. The mitigation should address the maintenance of wetland flooding and draining characteristics.

RESPONSE 16

It is agreed that while the avoidance of impacts to wetlands is a first priority in mitigating project impacts, avoidance in the absence of adequate buffers and adequate associated upland habitat can result in degradation of the functions and values of wetlands. If long-term maintenance of wetlands functions and values cannot be assured, it may be preferable to consider off-site mitigation instead of avoidance. This comment is in agreement with the third paragraph on page 3.2.3-26 of the Redevelopment Plan SEIR, which reads "If feasible, on-site wetland habitat compensation would be preferred, but off-site compensation may be an option, the final decision would be determined in consultation with the appropriate State and federal agencies."

RESPONSE 17

Please see Response 2. The biological opinion issued by the U.S. Fish and Wildlife Service (USFWS) in 1998 contains a mitigation for preservation in perpetuity: "All the vernal pool habitat and supporting uplands to be preserved for mitigation purposes are to be protected in perpetuity by a Service-approved conservation easement or similarly protective covenants in the deed. The conservation easement on the mitigation land is to be recorded at the appropriate recording office prior to project impacts. The easement/deed, including a title report for the land area, must be reviewed and approved by the Service prior to recordation. A copy of the recorded easement/deed must be provided to the Service within 30 days after recordation."

RESPONSE 18

Please see Responses 1 through 5 regarding mitigation for the tiger salamander. Southwest Area Plan EIR Mitigation Measure 3.2.3-7(a) (page 3.2.3-38), recognizes that "The potential effect on tiger salamanders includes reduction of the size or quality of breeding pools, loss of open space used by migrating adults, loss of California ground squirrel burrows used by adults for estivation, and increased likelihood for roadkill of migrating adults. Mitigation for the California Tiger Salamander must take into account the different biological and ecological requirements of the early aquatic stages and the largely terrestrial adults. Failure to adequately consider each of these life history stages may lead to elimination or reduction of the species."

The Area Plan EIR (page 3.2.3-31) states: "To comply with the State and federal no-net-loss policy, a wetland mitigation plan would be developed that would create wetlands at no less than a 1:1 ratio of one acre created or enhanced for each acre lost due to project activities." Area Plan EIR Mitigation Measure 3.2.3-7(b), which addresses mitigation for impacts to the CTS, was incorporated by reference into the Redevelopment Plan SEIR. Programmatic consultations on a project-by-project basis as described in Response 3 would need to include consideration of CTS breeding and upland aestivation habitat as well.

RESPONSE 19

The comment appears to express concerns regarding maintaining the flooding of existing wetlands when wetlands are to be preserved in their existing locations. The protection and maintenance of wetlands and vernal pools is described on pages 3.2.3-24 through 3.2.3-27 of section 3.2.3, *Biological Resources*. These protection mechanisms include consultations with representatives of the U.S. Fish and Wildlife Service and California Department of Fish and Game where potential disturbances to wetlands and vernal pools are identified through any form of construction, including alteration/modification of drainage courses..

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Grassland Foraging Areas for Sensitive Bird Species 3.2.3-6.

20 Mitigation 3.2.3-6 indicates there is no feasible mitigation. These impacts can be mitigated through conservation of grasslands along stream corridors, increased vernal pool and swale area conservation, and parks.

New Road Construction: Impact 3.2.3-10: The construction of new roads (Fresno Avenue, Northpoint Parkway-West, and Bellevue-Ludwig connector) could result in the disruption and mortality of habitats and sensitive species (vernal pools and salamanders).

21 We concur with mitigation 3.2.3-10, that vernal pools should be relocated as near their original position and condition as biologically feasible. Review of Figure 3.1.2-1 (Land Use Diagram) incorrectly indicates many existing wetland areas and potential mitigation areas (for above mitigation) are zoned for residential development (re: Broadmore South, the south end of the runway, about one-half of the open space area in the southwest corner of the runways, the Army site on the corner of South Wright and Finley Avenue, and others). This needs to be corrected to protect existing resources and to provide the above mitigation. This area contains enough connected resources to provide a major vernal pool reserve area and the Department does not believe it should be reduced by off-site mitigation. The wetland map (Figure 3.2.3-2) clearly illustrates the large wetland areas proposed for reserve that contain endangered species.

22 The south end of the runway contains wetlands and the endangered plant, Sebastopol meadowfoam (*Limnanthes vinculans*), and is a major movement corridor for CTS. This area, the proposed park, and other areas need specific review to assure that adequate measures are incorporated into projects to allow for CTS migration. We also support the recommended mitigations for solid road dividers and under road culverts for salamander protection.

23 **Roseland Creek Trail:** (Figure 3.1.3-3) The trail location is not clear along Roseland Creek, and we wish to make certain that it is along the Fresno Avenue and Northpoint Parkway side of the channel, and that it provides salamander under crossings at multiple locations. It should also be as far from the creek as possible. It may be better to provide a combination sidewalk and bike trail adjacent to Fresno Avenue.

RESPONSE 20

In regard to the loss of grassland foraging habitat for birds, Redevelopment Plan SEIR Mitigation Measure 3.2.3-6 states that "There is no feasible mitigation available. As removal of grassland would restrict the area available within the Planning Area for foraging, this impact would remain potentially significant. (PS)" While it is true that the conservation of grasslands along stream corridors, and increased vernal pool and swale area conservation would help to mitigate the impact, the cumulative loss of grassland habitat is considered significant and unavoidable.

RESPONSE 21

Please see Responses 3 and 4.

RESPONSE 22

See Responses 1 through 5 regarding the California tiger salamander. Open Space and Low Density/Open Space areas are indicated on the Southwest Area Plan *Land Use Diagram* (July 23, 1996) and Figure 3.1.2-1 of the EIR where occurrences of the tiger salamander are known (see Figure 3.2.3-3, *Wildlife Occurrence Locations* in section 3.2.3, *Biological Resources*). See also Response 19 regarding wetlands and vernal pools. Under road culverts are explained on page 3.2.3-26 and are intended to provide underground passageways as movement corridors between wetlands or drainage areas for amphibians, reptiles and small mammals.

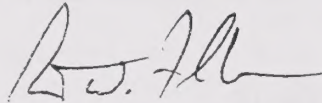
RESPONSE 23

Design details regarding the Roseland Creek trail would be subject to all of the mitigation measures respecting the tiger salamander as identified in the Redevelopment Plan and Area Plan EIRs. See also Responses 1 through 5.

Ms. Sonia Binnendyk
April 17, 2000
Page Four

If you have any questions regarding these comments, please contact Mr. Allan Buckmann, Associate Wildlife Biologist, at (707) 944-5537; or Mr. Carl Wilcox, Habitat Conservation Manager, at (707) 944-5525.

Sincerely,

A handwritten signature in dark ink, appearing to read 'R. W. Floerke', with a stylized, cursive script.

Robert W. Floerke
Regional Manager
Central Coast Region

cc: Ms. Jane Hicks
U. S. Army Corps of Engineers

Mr. Curt McCaslan
U. S. Fish and Wildlife Service

Mr. Mike Monroe
U. S. Environmental Protection Agency

Ms. Betty Guggolz
California Native Plant Society

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California Regional Water Quality Control Board

North Coast Region

William A. Hoy, Chairman

Winston H. Hickox
Secretary for
Environmental
Protection

Internet Address: <http://www.swrcb.ca.gov/~rwqcb1/>
5550 Skylane Boulevard, Suite A, Santa Rosa, California 95403
Phone (707) 576-2220 FAX (707) 523-0135



Gray Davis
Governor

April 20, 2000

RECEIVED

APR 24 2000

City of Santa Rosa
Housing and Redevelopment

Jocelyn Lundgren
Santa Rosa Redevelopment Agency
90 Santa Rosa Avenue
Santa Rosa, CA 95402

Dear Ms. Lundgren:

Subject: Comments on Draft Subsequent Environmental Impact Report for Southwest Santa Rosa Redevelopment Plan

Thank you for giving us the opportunity to comment on the above referenced document. The North Coast Regional Water Quality Control Board (Regional Board) is the state agency responsible for protection of water quality within this area. Comments below are accompanied by page numbers for your reference.

- 24
1. **Page 3.2.2-15:** On this page it is mentioned that urbanization of the Colgan Creek, Roseland Creek, and Naval Creek watersheds will result in the need for channel improvements to convey increased storm water flows. It is also stated that these are natural channels and that it is the intent of the City of Santa Rosa General Plan that the City work "to preserve and restore the natural network of creeks and creek habitats" in the City. Although in the past it has been common to channelize streams to make them more efficient in moving water downstream, it is the practice of the Regional Board to encourage other techniques. Overflow Easements and Bypass Conduits are two methods that will protect developments surrounding these creeks from floodwaters, and still allow these channels to exist in their natural states. The Town of Windsor is in the midst of implementing many drainage improvements to prevent flood inundation of surrounding areas, and would be a good source to contact on their methods to increase storm water conveyance with minimal disturbance to the natural channel. The Regional Board strongly encourages the preservation of natural channels through the use of flood conveyance methods other than channelization.

Further down this page it is mentioned that even if capacity problems above are addressed and a drainage structure is in place there may be a need for modification of drainage channels downstream from the Plan Area to prevent flooding along the Laguna De Santa Rosa. Please refer to the above statement about preserving natural channels. The Regional Board encourages projects be constructed in a manner that allows for the highest level of storm

California Environmental Protection Agency



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RESPONSE 24

The development of the Colgan Creek, Roseland Creek, and Naval Creek watersheds will result in higher rates and volumes of storm water runoff as described in the SEIR. The set of concerns raised by the California Regional Water Quality Control Board (RWQCB) restates these issues and directs the Redevelopment Agency to consider appropriate alternatives for channel improvements that convey increased storm water flows and still preserve or restore the natural network of creeks and creek habitats within the City. It is true that overflow easements and bypass conduits are two methods that will protect developments surrounding these creeks from floodwaters, and still allow these channels to exist in their natural states. Additional examples cited by the RWQCB and as indicated in Mitigation Measure 3.2.2-1 on pages 3.2.2-15 and 3.2.2-16 present approaches to minimize urbanization impacts on overall watershed values.

25 water infiltration. At present there are a number of technologies available, such as unit pavers (which function like bricks) and matrix products that provide extremely good stability and load bearing capability for otherwise unstable but highly pervious surfaces such as soil, gravel and grass. Use of such products will allow soil stability and ground water reinfiltration, which may result in lower flows downstream from the project. All new development projects or major redevelopment projects should be required to consider post-construction storm water runoff controls to reduce pollutant and runoff flow levels to pre-construction levels. Such requirements would be consistent with control measures required of the City under their NPDES Municipal Storm Water Permit.

26 2. **Page 3.2.2-19 Mitigation Measure 3.2.2-3:** Letter A. states that construction will be scheduled for the dry season (April through September) to the extent that this is practicable. The Regional Board supports this schedule which avoids construction in the rainy season. Although, at this time, we have no regulations prohibiting construction from occurring during the rainy season, we strongly discourage it. This would also be a local control measure which would satisfy the intent of the City's Municipal Storm Water permit. The potential for an illicit discharge to waters of the United States while engaged in construction, grading, or other activities during rainy weather increases dramatically. All bare soil should be stabilized according to measures developed in the Storm Water Pollution Prevention Plan (SWPPP) during the wet weather seasons. Therefore we encourage and support a construction schedule that will allow for discontinuance of activity should weather become an issue.

27 3. **Page 3.2.3-10 Map:** When looking over the map on this page it is obvious that construction of this redevelopment project in both subareas A and B will cut portions of wetlands and vernal pools off right in their middle. Consideration must be taken when approximating the acres of waters of the United States affected to either include the portions of the wetlands and vernal pools/swales cut off from the project boundaries or implement a monitoring program to ensure their livelihood. A monitoring program would be necessary to ensure that decreasing their size and building directly adjacent to them does not harm the wetlands and vernal area, outside the boundaries of construction. If it is found that wetlands and vernal pools/swales in these adjacent areas have been affected by construction it will be necessary to provide mitigation to make up for this loss. Any construction that would decrease the function and value of the wetlands or vernal areas or their beneficial uses would be highly discouraged and must be mitigated for.

28 4. **Page 3.2.3-24 Impact 3.2.3-3:** This impact states that construction could result in the loss of vernal pools, vernal swales, and freshwater emergent wetlands. Any project, which will result in the filling of waters of the United States, is under the jurisdiction of the Regional Board and must obtain a Clean Water Act Section 401 permit. The Regional Board suggests that you avoid building on or near these wetlands and vernal pools or at the least minimize the effects of the project on these areas. Any detrimental impacts to wetlands are considered a significant impact according to CEQA. If these waters are affected by construction the Regional Board requires a minimum 1:1 in-kind mitigation for both temporal and actual loss.

RESPONSE 25

Please see Response 24.

RESPONSE 26

The Storm Water Pollution Prevention Plan (SWPPP), is described on pages 3.2.2-19 through 3.2.2-21 in section 3.2.2, *Hydrology and Water Quality*. Stabilizing disturbed areas as quickly as possible, either by vegetative or mechanical methods, is one of the many erosion and sedimentation control measures discussed to be included in the SWPPP.

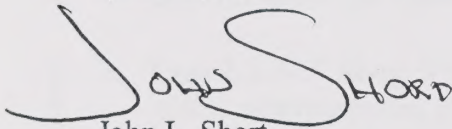
RESPONSE 27 and 28

Please see Responses 3 and 18 regarding wetlands and vernal pools.

- 29 5. **Page 3.2.3-27 Impact 3.2.3-4:** On this page it states that construction could have the potential to alter existing hydrological characteristics of vernal pool/swale systems. It is very important to assess exactly what specific impacts construction will have on the wetland areas. Consideration should be given for redirected and cut off flows as well as loss of groundwater recharge. If flow to these waters of the United States will be altered enough to result in their deterioration, this loss must be mitigated at a 1:1 ratio.
- 30 6. **Page 3.2.3-32 Impact 3.2.3-9:** This impact states that the removal of trees etc. for the construction project could result in a "take" from bird nest abandonment. Proposed mitigation for this states that removal of trees and shrubs will be avoided February 1 through August 31, however if the nesting period cannot be avoided a survey will be conducted. It comes to our attention that you have stated that you plan to do construction only during the dry season (April-September). This conflicts strongly with the dates above during which you state you will not be removing trees. It appears that if construction will continue during the dates stated on page 3.2.2-19 it will be necessary to survey the trees for nesting birds. How do you propose to remedy these conflicting time schedules?

If you have any questions or comments regarding our comments, please contact Katherine Spivak at 576-2290 or me at 576-2065.

Sincerely,



John L. Short
Senior WRC Engineer

KS:tmk\ksredevelopmentdraftseir.doc

RESPONSE 29

The Area Plan EIR (page 3.2.3-31) states: "To comply with the State and federal no-net-loss policy, a wetland mitigation plan would be developed that would create wetlands at no less than a 1:1 ratio of one acre created or enhanced for each acre lost due to project activities."

See also Response 3 regarding wetlands and Response 7 regarding groundwater recharge.

RESPONSE 30

Mitigation Measure 3.2.3-9 provides that where an active nest is discovered in areas to be disturbed, construction shall be postponed for at least two weeks or until a wildlife biologist has determined that the young have fledged (left the nest).



Department of Toxic Substances Control

Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721



Gray Davis
Governor

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

April 21, 2000

Ms. Sonia Binnendyk
City Planner
Santa Rosa Redevelopment Agency
90 Santa Rosa Avenue
Santa Rosa, California 95402

Dear Ms. Binnendyk:

SOUTHWEST SANTA ROSA REDEVELOPMENT PLAN, DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT, SCH# 1999102091

The Department of Toxic Substances Control (DTSC) has reviewed portions of the Southwest Santa Rosa Redevelopment Plan, Draft Subsequent Environmental Impact Report (SEIR) pertaining to hazardous materials. We have the following comments:

- 31 1. Solubility Criteria for Hazardous Wastes - On page 3.1.8-3 (second bullet), it is stated, "The California Department of Toxic Substances Control has classified PCBs [polychlorinated biphenyls] as a hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or 50 ppm in non-liquids." The 5 ppm concentration which is being referred to is the Soluble Threshold Limit Concentration (STLC). Please note that STLCs not only apply to liquid wastes, but also apply to the extract from non-liquid wastes which are subjected to the Waste Extraction Test (see Title 22, California Code of Regulations, Section 66261.24(a)(2)).
- 32 2. New Private Domestic Wells - On page 3.1.8-17, the City of Santa Rosa's General Plan policy to discourage the construction of new wells which may act to spread or draw contaminated groundwater is identified. DTSC believes that construction of new private domestic wells in or near known areas of groundwater contamination should be prohibited at this time.
- 33 3. Soil Cleanup Standards - On page 3.1.8-21 (last paragraph), it is stated, "Soil and groundwater monitoring and remediation will be completed as deemed necessary to protect future occupants of the site, neighboring properties, and groundwater quality." The SEIR should make it clear that soil cleanup standards for sites which are remediated will be consistent with future use. Specifically,

RESPONSE 31

The first sentence in the *PCBs* paragraph on page 3.1.8-3 is changed to read:

“The California Department of Toxic Substances Control has classified PCBs as a hazardous waste when concentrations exceed 5 parts per million (ppm) in liquids or when a standard extract of a non-liquid exceeds 5 ppm.”

RESPONSE 32

As described on page 2-7 in section 2, *Project Description*, the Development Assistance Program under the Redevelopment Plan will provide assistance with hazardous remediation and the removal of hazardous wastes. The Public Projects Program will provide for municipal water system upgrades and the extension of water systems and water hookups, and reduce dependence on the use of wells for water. The cleanup of hazardous materials sites and reduced dependency on the use of wells (including wells that are contaminated), is noted as beneficial under the Redevelopment Plan.

RESPONSE 33

The second sentence in the bottom paragraph on page 3.1.8-21 is changed to read:

“The project applicant will evaluate the potential human and environmental risks associated with the existing contamination and proposed remediation strategies and work with regulatory agencies to select a prudent approach to address site conditions consistent with foreseeable future uses. For example, if residential uses are proposed for a contaminated site, cleanup standards will be based on human health risk standards using residential exposure parameters.”

Ms. Sonia Binnendyk

April 21, 2000

Page 2

33 any contaminated sites which will ultimately become residential properties (i.e., single family homes, townhouses, or apartments) should be remediated to human health risk-based cleanup standards which are established using residential exposure parameters.

34 4. Risk Evaluation - On page 3.1.8-21 (last paragraph), it is stated, "The project applicant will evaluate the potential human and environmental risks associated with proposed remediation strategies and work with regulatory agencies to select a prudent approach to address site conditions." We suggest that this statement be revised to convey that the human health and environmental risks posed by contaminated media shall be evaluated along with the risks associated with the proposed remediation strategies.

5. Potentially Applicable Requirements for Mitigation Measure 3.1.8-1 - This mitigation measure includes characterization activities that will be performed to identify existing contamination at sites. In the event that contamination is discovered and/or remedial activities are conducted, additional requirements which may be potentially applicable, but are not addressed in the SEIR are discussed below.

35 California Health and Safety Code, sections 101480 to 101490 include provisions for oversight of site cleanup activities by local agencies (e.g., county environmental health departments). Section 101487 requires that written notification be provided to DTSC and the Regional Water Quality Control Board at least ten working days before the local agency enters into a remedial action agreement with a responsible party for a site.

California Health and Safety Code, section 25359.4, requires that any release of a "reportable quantity" of hazardous substance shall be reported to DTSC in writing within 30 days of discovery.

If you are not already aware, the California Health and Safety Code (Division 24, Part 1, Chapter 4, Article 12.5) includes provisions pertaining to redevelopment which were added by the Polanco Act. The Polanco Act provisions grant local redevelopment agencies qualified immunity from State or local laws if cleanup is conducted in accordance with a remedial action plan approved by DTSC, the Regional Water Quality Control Board, or a local agency. Under these provisions, liability immunity extends to property successors and lenders. The Polanco provisions do not need to be addressed in the SEIR, however we wanted to bring this available mechanism to your attention.

RESPONSE 34

Please see Response 33.

RESPONSE 35

The following is added to the end of the first paragraph on page 3.1.8-3:

“Site cleanups can be overseen by local agencies when written notification is given to the California Department of Toxic Substances Control and the California Water Quality Control Board. Releases of hazardous substances in excess of certain quantities must be reported to the California Department of Toxic Substances Control within 30 days of discovery.”

APR-21-2000 16:20

CAL-EPA DTSC

510 540 3819 P.04/04

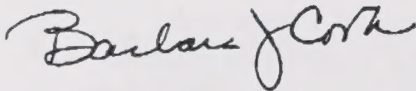
Ms. Sonia Binnendyk

April 21, 2000

Page 3

If you have any questions regarding these comments, please contact Mark Piros at (510) 540-3832.

Sincerely,



Barbara J. Cook, P.E., Chief
Northern California - Coastal Cleanup Operations Branch

cc: Mr. Ken Tipon
Department of Toxic Substances Control
Planning and Environmental Analysis Section
CEQA Tracking Center
400 P Street, 4th Floor
P.O. Box 806
Sacramento, California 95812-0806

Mr. Bill Erdei
California Regional Water Quality Control Board
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Ms. Katie Shulte
Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street
Sacramento, California 95814

REDEVELOPMENT AGENCY OF THE CITY OF SANTA ROSA
SPECIAL MEETING
Council Chamber, City Hall
100 Santa Rosa Avenue, Santa Rosa, California.
April 10, 2000

MINUTES

- Convene The Redevelopment Agency of the City of Santa Rosa met in special session at 10:15 a.m. on the 10th day of April, 2000 in the Council Chamber, City Hall, 100 Santa Rosa Avenue, Santa Rosa, California.
- Roll Call Present: Chairman Picchi, Mr. Lowry and Mr. Arnone. Mr. Evans and Mr. McKeon were absent. Also in attendance were Executive Director Stephen F. Burke, Housing and Redevelopment Manager Jocelyn Lundgren, Program Specialist Chaney Delaire, City Attorney Rene Chouteau and Recording Secretary Jan Harrison.
- Public Appearances Duane DeWitt, Roseland, discussed housing matters and distributed handouts to Agency members. He asked that the Agency research AB2398 for mixed use multifamily housing and retail development along new or existing mass transit corridors. Mr. DeWitt commented that HUD has proposed providing for the production of affordable housing. He is specifically interested in owner-occupied, HUD subsidized affordable housing. He also discussed brownfields revitalization and pointed out a map of the existing Roseland Redevelopment Project Area, some of which lies within the City of Santa Rosa and perhaps might be folded into a redevelopment project with Santa Rosa called the Southwest Redevelopment Project. Mr. DeWitt urged the Agency to look into opportunities for the clean up of toxic sites, known as brownfields, so they can be redeveloped as mixed use that would have both commercial and housing.
- Acknowledgments/
Announcements Mr. Burke pointed out that the Council meeting was scheduled the following day at 3:00 p.m. at which time there would be a study session on downtown housing. Two memorandums will be reviewed; one from the Redevelopment Agency as a follow-up to its study session on downtown housing which was initiated as a result of Hugh Futrell's report on downtown housing, and the other report to be reviewed is a similar response from the Planning Commission. Mr. Burke will make the Planning Commission's memorandum available to Agency Members.
- Abstentions None.
- Public Hearing on
Southwest Santa
Rosa Redevelopment
Project Subsequent
Environmental Impact
Report (SEIR) Ms. Delaire announced that Ted Adams, from E.I.P. Associates, the consultant who had prepared the Draft SEIR, was in the audience and is prepared to provide an overview of the process and what has been found in the EIR.
- The issue before the Agency is whether or not it will hold a public hearing and take comments on the Draft Subsequent Environmental Impact Report for the proposed Southwest Redevelopment Santa Rosa Project. Last month this EIR was distributed and reviewed. On March 6, the Agency adopted a resolution determining the adequacy of the Draft SEIR and directed staff to circulate the document and schedule this public hearing. On March 9, the Planning Commission held a study session and reviewed both the Redevelopment Plan as well as the Draft SEIR. On March 23 the Planning Commission again reviewed both the Plan

and the Draft SEIR and adopted a resolution recommending that the Redevelopment Plan be adopted. There were no Planning Commission comments on the Draft SEIR. On March 8 staff released and distributed the document. There is a 45-day public review period which expires on April 24. All comments that are received will be responded to and addressed in the final EIR.

Ms. Delaire introduced Steve Coleman who did the traffic analysis update for the document. Sonia Binnendyk is also present and she has been involved throughout this process.

Staff recommends that the Agency hold the public hearing and take comments on the document.

Chairman Picchi asked if any of the consultants wished to make comments prior to the public hearing being opened.

Ted Adams, E.I.P. Associates, gave a general background stating that in 1994 an EIR was prepared for the Southwest Area Plan, which included the redevelopment area generally described as south of Highway 12 and west of U.S. 101. Since that time, some environmental conditions have changed in the area, such as traffic, and there has been some new construction. In addition, the area plan EIR has expired because it was prepared more than five years ago. As a result, a Subsequent EIR has been prepared which specifically addresses the Redevelopment Plan and updates the previous Southwest EIR and each area is addressed separately.

The Redevelopment Plan was treated as conceptual in the EIR. Redevelopment is a vehicle to alleviate blight. In implementing the Redevelopment Plan, particularly the public projects program of sewers, water supply, roads and drainage facilities, some of the related impacts could extend beyond the Redevelopment Area itself and into the Southwest Area Plan. The assessment of traffic impacts of intersections includes all portions of the Redevelopment Area itself.

Mr. Adams discussed major findings of the EIR. It was found that the Redevelopment Plan would be consistent with the goals, objectives and policies of the Southwest Area Plan and the Sonoma County General Plan, inclusive of policies relating to land use, circulation, transportation, affordable housing, the promotion of City-centered growth, improving groundwater through hazardous materials cleanup, minimizing drainage problems, urban improvements and any other technical areas. On the issue of traffic, through cumulative development, it was determined that eight arterial streets would be impacted but these impacts could be mitigated through improvements to 16 individual intersections. Those improvements are laid out in a list in the document. It was found, however, that cumulative traffic growth and F levels of service on Highway 101 during the p.m. peak hour would be unavoidable, even with the addition of lanes in both north and south directions.

Regarding the issue of public services, build out within the Plan area would require 36 more police officers, one fire station would need to be relocated and two additional stations would need to be built to maintain adequate response times. New students would be generated with increased development that would require new school facilities which would require the necessary funding and fees in order to build.

Regarding utilities, the Sonoma County Water Agency is experiencing some regulatory restraints and litigation regarding sources of water and water supply, and it was noted that the City is in the process of studying new wells and additional storage capacity. However, with development, the City would still be able to remain within its allotment of 50 million gallons per day.

Concerning visual quality, cumulative development would convert undeveloped parcels to an urban condition, and this is noticed as a significant visual change in the south to west portions of the Plan Area. It was also noted that the Redevelopment Area itself is over 90% urbanized.

The presence of hazardous materials in old buildings, soil and groundwater could affect the health and safety of workers in unsafe conditions. Accordingly, site safety and health plans would need to be required for demolition and reconstruction activities that would take place in the Plan Area.

It was shown that site cleanup under the Redevelopment Plan was actually a beneficial impact.

With regard to soils and geology, the region itself is active and there would be specific code requirements on foundations and building design that would need to be implemented for new construction.

Regarding hydrology and given the importance of wetlands, drainage ways, creeks and other environmental concerns in the Southwest Area, an extensive erosion control program is outlined in the EIR to mitigate potential sedimentation and flooding impacts that could result from new construction.

On the issue of biological resources, potential impacts to valley oaks, vernal pools, wetlands and sensitive species are described together with mitigation measures to reduce those impacts. In recent years, since the earlier EIR was done, we have noticed that there are quite a few changes in the regulations relating to sensitive species and changes regarding the listing of wetland species and construction of wetland areas. These regulations are constantly changing, and a report is being put together on that issue that will be available for viewing.

The loss of grassland habitat for wildlife foraging was listed as a significant impact in the document.

On air quality, construction dust is a major concern, and methods to control it are described in the EIR.

It was noted that various traffic and circulation improvements that would be implemented under the public project program would actually improve traffic conditions, and this is listed as a beneficial impact, too.

On the issue of noise, there was a projection for the increase in traffic resulting from cumulative development and that would result in traffic noise on existing land. This is also noted as a significant impact.

The alternatives examined included a no project alternative, which is required, and which the objectives of the Plan would really not be met. There was a reduced

Redevelopment Plan where the objectives of the Plan would also not fully be met. There was also an expanded Redevelopment Plan and this was somewhat speculative in view of the way the financing mechanisms are all set up for the Plan the way it is now. Neither of these alternatives really mitigate the significant impacts that were identified. The superior alternative was considered to be the Redevelopment Plan as somewhat redefined with all the mitigation measures factored into the Plan itself. That was a major conclusion.

Steve Coleman, Dowling and Associates, who was responsible for preparing the traffic and transportation portion of the document, discussed the key findings. Additional traffic counts were done in November of 1999 to update the 1994 EIR. They also updated policy information such as the bicycle plan, street classifications, etc. The worst congestion areas, other than U.S. 101, were in order of delay: Sebastopol Road and Wright Road, Highway 12 and Wright/Fulton Road and Baker Avenue and Corby Avenue. The conclusions were that with all of the recommended mitigations in place, there would be no City streets that would operate at worse than the level of service D, which is the City standard. U.S. 101 would continue to be congested due to growth throughout Santa Rosa and Sonoma County communities. A few individual intersections, however, would probably perform at less than level of service D. The two most important of these are Sebastopol Road and Stony Point Road and Sebastopol Road and Dutton. In both of these cases they would be slightly into the level of E range.

Chairman Picchi opened the public hearing and asked if there were any comments from the audience.

36 Len Swenson, Sierra Club local group, commented there are a number of concerns they have with the conclusions on the impacts of the project. Regarding the detention basins on ponds, the study suggests that the City should encourage that there be some work done to prevent the problem there. Secondly, on impacts to the oaks, it is stated it should be avoided whenever possible. He believes the oaks should be protected, not just whenever possible. The impacts to the wetland resources should be avoided or minimized. He doesn't think that is a high enough standard and thinks those wetlands should definitely be protected. He doesn't believe the standard is high enough regarding to the avoidance of the wetlands impact to threatened or endangered species and their habitats. He commented there should be no wetland impacts to the species and there are a lot of endangered species in that area and they should be protected. Regarding relocation of the vernal pools, he thinks severe penalty should result if there is non-environmentally sensitive relocation of these pools. In general, he stated he is disappointed with the conclusions that were made from the study when it says that these things should be avoided. He believes we should set a higher standard than just avoidance.

37 Mr. Lowry pointed out that each of the impacts Mr. Swenson pointed out had been identified as being insignificant. Mr. Swenson stated he disagreed with the conclusion.

38 Duane DeWitt, Roseland area, commented on the SEIR announcement, which said that there would be discussion on the Economic Development Program, Neighborhood Revitalization Program and the Housing Program. He asked when that discussion would be heard. If it is the information that is included in the SEIR,

RESPONSE 36

Please see Response 9 regarding the mitigation of impacts to biological resources.

RESPONSE 37

The unavoidable, significant adverse impacts are summarized in section 5, *Unavoidable, Significant Adverse Impacts*. The unavoidable impacts include Level of Service E or worse conditions on U.S. 101 during the PM peak hour, significant changes in visual conditions within central to south and west portions of the Southwest Plan Area, loss of grassland foraging area for sensitive bird species, and increased traffic noise affecting existing land uses. These are all cumulative impacts which cannot be avoided. All other impacts can be reduced to less than significant levels as explained in each of the technical sections of the EIR.

RESPONSE 38

The various programs under the Redevelopment Plan are described on pages 2-6 through 2-8 in section 2 of the Draft EIR, *Project Description*. As noted on page 2-6, the Redevelopment Agency's redevelopment programs are conceptual in nature. Due to the lengthy time frame for implementing the Redevelopment Plan (30 years), the programs of redevelopment are intended to be flexible and provide the capability to respond to changes and private sector interests in the Redevelopment Project Area.

The comment focuses on the Redevelopment Plan, not the adequacy of the EIR. The Santa Rosa Redevelopment Agency *Redevelopment Plan for the Southwest Redevelopment Project (Draft)*, March 6, 2000, and Santa Rosa Redevelopment Agency *Preliminary Report for the Proposed Southwest Redevelopment Project*, Keyser Marston Associates, Inc., January, 2000, are available for public inspection at the offices of Housing and Redevelopment, 90 Santa Rosa Avenue, Santa Rosa, Calif. 95402-1806.

38

he feels it is too vague and broad based to significantly inform the public as to what will occur. He wants to know what specific assistance will be undertaken. Hazardous materials have already been well identified. Existing problems throughout the community have been well identified. It says assistance will be provided to build, improve and preserve low and moderate income housing. It doesn't say how it is going to do that and it also doesn't specifically relate to where that can be provided and to what levels of affordability it will be provided. He is hoping it will be from the lowest level of affordability for residents who already live within the Southwest Redevelopment Project Area. Right now, he believes the housing projects that are going in are displacing those people because there is no affordable housing in either of the two major subdivisions that have gone forward at this time. The City's Redevelopment Program of the last few years has directed a large amount of money to rehabilitation of existing housing, specifically in the Apple Valley/Papago Court area. He is hoping they will have a different approach in the Southwest Redevelopment Project Area that will specifically target all of the funding to the Southwest Area and that it will take a portion of it to the production of new housing, specifically for ownership. He stated he is making these references so these things will be addressed because the public announcement for today states Housing Program to be included.

39

Mr. DeWitt commented that Mr. Adams pointed out about traffic, and he made a statement that even with adding the additional lanes on Highway 101, we are still going to have a level of F service out there. It's interesting to read that we are going to have a level of F at some of our most important intersections all of the time. We have to find better mitigation than just saying we are going to improve those intersections, we have to find a way to reroute traffic perhaps and he hopes this might be addressed. Mr. Coleman had pointed out that Sebastopol Road at Stony Point and Sebastopol Road at Dutton would only be at level E and Mr. DeWitt stated he was disputing this because he feels it is already at level F a good portion of the day. He requested that we perhaps have traffic counts from Eugene Benton, the City's Deputy Director Public Works Traffic, on Sebastopol Road at those sites, Stony Point Road, Dutton Road, also on the Cedar Roads, Stony Point and Dutton, and also on Hearn Avenue and that we get an accurate count of where traffic is at right now. Mr. DeWitt also addressed the statement that site cleanup will be a beneficial impact for redevelopment. He stated he is aware that there are toxic sites at the air field from when it had been utilized by the Navy. He hopes that the EIR we have now will go deeper into what the levels were at this point, and then help the community find out how to remediate and resolve any toxic problems there and at the same time work with the federal government to perhaps link to clean up to other known toxic sites in that neighboring redevelopment project area that the County has, which may be rolled over into this Southwest Redevelopment Project Area. Mr. DeWitt hopes that the foremost venture for redevelopment of the Southwest Area is true redevelopment of the blighted area in what the Agency terms as Area A rather than Subarea B.

40

41

Mr. Lowry commented we do have to balance the available funds where the needs are.

There being no further comments from the audience, Chairman Picchi closed the public hearing and asked for comments from Agency Members.

RESPONSE 39

Section 3.1.3 of the Draft EIR, *Traffic and Circulation*, contains two tables that indicate service levels with and without mitigation. Table 3.1.3-7 on page 3.1.3-30 shows future intersection levels of service and Table 3.1.3-8 on page 3.1.3-31 shows future corridor levels of service. Table 3.1.3-7 shows that without mitigation, most intersections would operate at LOS F, but with mitigation, all intersections would operate at LOS D or better ranging up to LOS A. Table 3.1.3-8 shows that without mitigation, most corridors would operate at LOS E or F, but with mitigation, all corridors would operate at LOS D or better ranging up to LOS A. The unavoidable significant traffic impact would be LOS E or worse conditions on U.S. 101 during the PM peak hour, even with freeway widening in both north and south directions.

RESPONSE 40

Please see Response 39 regarding traffic impacts. Existing intersection levels of service (1999 conditions), are shown on Table 3.1.3-4 on page 3.1.3-15. The levels of service were calculated using the highest volumes counted in a 60 minute period between 4 and 6 PM. This is typically the hour beginning at 4:15 or 4:30 PM.

RESPONSE 41

The information contained in Section 3.1.8 of the Draft EIR, *Hazardous Materials*, has been updated and is the latest available information regarding hazardous materials and hazardous wastes in the Southwest Plan Area. The former Naval Air Station property (Air Center site), is discussed on pages 3.1.8-13 and 3.1.8-14 and cleanup activities are explained on page 3.1.8-14. The U.S. Army Corps of Engineers has been investigating and cleaning up contamination that resulted from past air station activities.

Mr. Lowry stated it would be rather difficult to determine how much toxic contamination there is since it requires several phases of on-site assessments that might be impractical at this point.

42

Mr. Amone wanted to be sure that improved traffic circulation was going to be a beneficial impact identified in the Draft EIR and not a detrimental impact. Mr. Coleman said that was correct.

Adjournment

There being no further business to come before the Agency, Chairman Picchi adjourned the meeting at 10:50 a.m.

Jan Harrison, Recording Secretary

JPH/RAMINS10APR00.wpd

RESPONSE 42

See Response 39 regarding traffic impacts. While the traffic mitigation would improve traffic flow conditions in the Southwest Plan Area under future cumulative development, as noted on page 3.2.4-13 in section 3.2.4, *Air Quality*, roadway and circulation improvements would generate air quality benefits by relieving congestion. The impact on regional air quality would be a benefit because the improvement projects would result in better traffic flow, higher travel speeds and decreased vehicular emissions.



Gray Davis
GOVERNOR

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse



Loretta Lynch
DIRECTOR

April 25, 2000

Jocelyn Lundgren
City of Santa Rosa, Redevelopment Agency
90 Santa Rosa Avenue
Santa Rosa, CA 95402-1678

Subject: Southwest Santa Rosa Redevelopment Plan
SCH#: 1999102091

Dear Jocelyn Lundgren:

The State Clearinghouse submitted the above named Supplemental EIR to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on April 24, 2000, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Terry Roberts
Senior Planner, State Clearinghouse

Enclosures
cc: Resources Agency

RECEIVED
APR 28 2000
City of Santa Rosa
Housing and Redevelopment

**Document Details Report
State Clearinghouse Data Base**

SCH# 1999102091
Project Title Southwest Santa Rosa Redevelopment Plan
Lead Agency Santa Rosa, City of

Type sir Supplemental EIR
Description Redevelopment Plan for Southwest Santa Rosa, area includes residential, business, commercial and institutional land uses.

Lead Agency Contact

Name Jocelyn Lundgren
Agency City of Santa Rosa, Redevelopment Agency
Phone 707-543-3310 **Fax**
email
Address 90 Santa Rosa Avenue
City Santa Rosa **State** CA **Zip** 95402-1678

Project Location

County Sonoma
City Santa Rosa
Region
Cross Streets U.S. 101 and State Highway 12
Parcel No.

Township	Range	Section	Base
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Proximity to:

Highways 12
Airports
Railways
Waterways
Schools
Land Use Residential, retail and business service, office, public/institutional, general industry.

Project Issues Archaeologic-Historic; Air Quality; Aesthetic/Visual; Geologic/Seismic; Noise; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Vegetation; Water Quality; Water Supply; Wetland/Riparian; Wildlife; Growth Inducing; Landuse; Cumulative Effects

Reviewing Agencies Resources Agency; Department of Conservation; Department of Fish and Game, Region 3; Office of Historic Preservation; Department of Parks and Recreation; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 4; Department of Housing and Community Development; Integrated Waste Management Board; Regional Water Quality Control Board, Region 1; Department of Toxic Substances Control; Native American Heritage Commission; State Lands Commission

Date Received 03/08/2000 **Start of Review** 03/08/2000 **End of Review** 04/24/2000

DEPARTMENT OF TRANSPORTATION

P O BOX 23660
OAKLAND, CA 94623-0660
(510) 286-4444
TDD (510) 286-4454

April 24, 2000

RECEIVED

APR 28 2000

SON-GEN-0.0
SCH# 1999102091
SON000099



Ms. Jacelyn Lundgren
Santa Rosa Redevelopment Agency
90 Santa Rosa Avenue
Santa Rosa, CA 95402

City of Santa Rosa
Housing and Redevelopment

Dear Ms. Lundgren:

**SOUTHWEST SANTA ROSA REDEVELOPMENT PLAN - Draft Subsequent
Environmental Impact Report**

Thank you for continuing to include the California Department of Transportation (Caltrans) in the environmental review process for the above-referenced project. We forward the following comments:

43 Impact 3.1.3-2 states that the Redevelopment Plan, along with cumulative traffic growth, would have significant impact on U.S. 101 from Wilfred Avenue to Highway 12. Although this would no doubt be the case, congestion (both northbound and southbound) already extends well beyond these relatively short limits. Without providing some sort of mitigation, it can be expected that additional traffic generated by this and other projects will only exacerbate freeway congestion, not only between Wilfred Avenue and Highway 12 but other freeway segments north and south of those limits as well. Have any studies been made to assess the severity of impacts on freeway segments north of Highway 12 and south of Wilfred? Mitigation Measure 3.1.3-2: Designating the proposed HOV facilities in this area, as mixed flow lanes may not be as beneficial as it would appear. Freeway bottlenecks either north of Highway 12 or south of Wilfred may negate any benefits this would appear to have. This would again require that additional studies be made well beyond the short Wilfred to Highway 12 limits.

Without the traffic volumes, we are unable to comment on the validity of the traffic assessments. Please provide traffic volumes for both the build and no-build scenarios at all major intersections along Routes 12 and 101.

In reference to the changes proposed on Page 3.1.3-17, the interchanges at Hearn and Baker Avenue may remain and be reconstructed to meet current standards and traffic demands.

If you have any questions, please call Alice Jackson at (510) 622-1644.

Sincerely,

HARRY Y. YAHATA
District Director

By *Alice Jackson*

for JEAN C. R. FINNEY
District Branch Chief
IGR/CEQA

RESPONSE 43

No studies were included of freeway congestion north of Highway 12 or south of Wilfred Avenue. The focus in the analysis was on Highways 12 and 101, because they are in the immediate vicinity of the project. Also, the section of US 101 studied is the most congested section of this highway within Sonoma County.

Widening of U.S. 101 from approximately Wilfred Avenue to Highway 12 is expected to commence in the fall of 2000. Caltrans is currently preparing a project study report (PSR) for continuing the widening north, from Highway 12 to Steele Lane.

The project, which is a redevelopment plan, does not in and of itself worsen traffic impacts on Caltrans freeways. Land uses included as part of the plan were approved by the City of Santa Rosa in 1994, and an EIR was certified at that time. The project is, rather, an implementation tool for paying for many of the proposed infrastructure improvements. In fact, by facilitating the financing and implementation of the improvements, the project would assist in improving traffic conditions on surface streets.

The formation of bottlenecks, existing or future, can best be prevented by implementing ramp metering at the entry ramps of U.S. 101.

The comment regarding the Hearn and Baker ramps is noted. However, it may not be feasible to reconstruct these interchanges "to meet current standards and traffic demands," as the commentor notes. The interchange spacing in this area was based on mid-1950s design standards; Hearn, Baker, and Highway 12 are all located approximately ½ mile apart. Current standards call for urban freeways to have interchanges no closer than 1.5 km apart (approximately one mile), and 3 km (approximately two miles) between local street interchanges and freeways (such as Baker Avenue and Highway 12) [Reference: Caltrans, HIGHWAY DESIGN MANUAL, 5th edition, section 501.3, July 1, 1995].

Traffic volume data has been sent directly to the commentor, as requested.

Received: 5/ 3/00 2:15PM; ->City of Santa Rosa; #433; Page 2

05/03/2000 13:31 707

ENV. COMP.

PAGE 02

5-1-2000

City Council/City Manager
City of Santa Rosa
100 Santa Rosa Ave.
Santa Rosa, CA. 95403.
RE: Southwest Redevelopment Plan and EIR

Ladies and Gentlemen of the City Council:

(44)

Thank you for this opportunity to comment on the pending Draft EIR of the Southwest Redevelopment Plan. This EIR presents several serious omissions which point out blatant inconsistencies between the Southwest Plan, Santa Rosa 2010, the City's central planning document, and the haphazard development as it has proceeded.

Specifically, the project known as Air Center East, now approved by the City's Community Development Department places this city in direct non-compliance with the Southwest Plan and EIR. As you may know, these documents call for remediation and abatement of all known and unknown hazardous materials prior to any development. Unfortunately, this has not occurred.

Indeed, not only has the Department of Defense not signed off on this Formerly Used Defense Site and its extensive military use, but the City of Santa Rosa has seen fit to participate in study sessions regarding the planned use of the Air Center without the inclusion of Mr. Damian O'Bid who represents the NCWQRCB, the appropriate jurisdictional agency in this regard. He can be contacted at 707-576-2552 or by E mail at ObidD@rbl.swrcb.ca.gov. It is my suggestion that he be included in any future discussions of the Air Center. Failure to include him makes such sessions singularly futile and demonstrates the traditional pro-development bias which this City exemplifies.

Indeed, the omission in this regard represents bad faith and directly contradicts the good faith nature mandated by CEQA regarding the presentation of EIRs, as well as, any supplements. Apparently, the City chooses to include the development community while excluding anyone who might present the constraints involved in maintaining human health and safety.

Additionally, the City is obligated regarding the Northpoint Parkway Firestation in order to provide the most minimal of infrastructure for the thousands of new residents who look to you for these services. This is a further demonstration of the disparity between the Southwest Financing Plan, as approved by LAFCO, and the Redevelopment Plan.

It is my hope that you schedule a meaningful study session of toxic cleanup activities in the Air Center and that the Northpoint Firestation become a reality in the foreseeable future. In particular, I enclose for your reference the Cleanup and Abatement Order which governs the Santa Rosa Air Center.

Thank you for your attention.

Donna Strom
Sonoma County Wetland Watch
707-526-0820

c: Sonoma County Planning, attn: Kathi Jacobs ✓
United SW Assoc., attn: Michael Villoria

enclosure: Cleanup and Abatement Order

RESPONSE 44

The letter of comment does not address the adequacy of the SEIR and an SEIR response is not required. The Air Center is discussed on pages 3.1.8-13 and 3.1.8-14 of the Draft SEIR in section 3.1.8, *Hazardous Materials*.

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APPENDIX A

California Tiger Salamander and Salamander Tunnels

California Wildlife Habitat Relationships System

California Department of Fish and Game California Interagency Wildlife Task Group

A047 Tiger Salamander *Ambystoma tigrinum*

Family: Ambystomatidae Order: Caudata Class: Amphibia

Written by: T. Kucera

Reviewed by:

Edited by:

DISTRIBUTION, ABUNDANCE, AND SEASONALITY

In California, the tiger salamander is most commonly found in annual grass habitat, but also occurs in grassy understory of valley-foothill hardwood habitats, and uncommonly along streamcourses. Its range includes the Central Valley from Yolo Co. south to Kern Co., and coastal grasslands from the vicinity of San Francisco Bay south at least to Santa Barbara Co. One isolated population is known to exist at Grass Lake in Siskiyou Co. In California, most populations occur at elevations of less than 305 m (1000 ft), but they have been recorded up to 1370 m (4500 ft).

SPECIFIC HABITAT REQUIREMENTS

Feeding: Postmetamorphic juveniles and adults appear to be "sit and wait" predators (Lindquist and Bachmann 1980) taking earthworms, snails, insects, fish, and even small mammals (Stebbins 1972). Aquatic larvae feed on littoral, benthic, and planktonic arthropods. Small larvae (less than 2 cm) eat almost exclusively zooplankton, while larger individuals consume zooplankton, amphipods, mollusks, and insect larvae (Dodson and Dodson 1971).

Cover: Adults spend most of the year in subterranean refugia, especially ground squirrel burrows and occasionally man-made structures. During breeding migrations individuals are sometimes found under surface objects such as rocks and logs. Postmetamorphic juveniles retreat to mammal burrows after spending a few hours or days in mud cracks near water, or tunnels constructed in soft soil. Aquatic larvae seek cover in turbid water, clumps of vegetation and other submerged debris.

Reproduction: Tiger salamanders breed and lay eggs primarily in vernal pools and other temporary ponds. They sometimes use permanent human-made ponds if predatory fishes are absent. Streams are rarely used for reproduction.

Water: Rainfall is important to the formation and maintenance of breeding ponds. Most surface migrations and other movements by adults are associated with sustained rainfall, especially at night. In some localities, dispersal of postmetamorphic juveniles from breeding ponds is not associated with rainfall. In such cases, desiccation can cause significant mortality. Apparently desiccating individuals aggregate to reduce water loss (Alvarado 1967). This species also conserves water by tolerating high blood urea concentrations (Romspert and McClanahan 1981).

Pattern: Prime habitat in California is annual grass, but seasonal ponds, or vernal pools are crucial to breeding. Permanent ponds or reservoirs sometimes used as well.

SPECIES LIFE HISTORY

Activity Patterns: Adults exist in subterranean refugia most of the year. Before and after breeding, they emerge at night during rains. During breeding, some diurnal activity occurs. In late spring or early summer, postmetamorphic juveniles disperse from breeding sites at night.

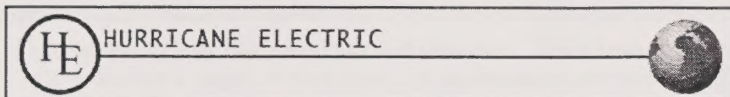
Seasonal Movements/Migration: In California, the first rains of November usually initiate adult migration to breeding ponds. They usually stay at the ponds a few days, but some individuals may remain up to several weeks after breeding is completed. Larvae transform during late spring or early summer, usually by the first week of July in central California. They disperse from the breeding sites after spending a few hours or days near the pond margins.

Home Range: Few movements occur during most of the year. Migrations to and from

breeding ponds may occasionally exceed 1000 m (3300 ft).

Territory: Not territorial.

Reproduction: Breeding and egg-laying normally occur from December through early February. Females lay numest of the year. Before and after breeding, they emerge at night during rains. During breeding, some diurnal activity occurs. In late spring or early summer, postmetam



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Photograph by George Sakkestad

Tiger Pause

Golf courses displace the once-thriving California tiger salamander

By Jim Rendon

Name: Ambystoma californiense

Status: California species of special concern

Natural Habitat: Coastal foothills to Sierra foothills, primarily Central Valley

Last Stand Here: Ponds and open fields, primarily in the eastern foothills

Reason for Demise: Golf course development, sprawl, bullfrogs

A CENTURY AND A HALF AGO, Santa Clara County was tiger salamander paradise. The valley floor was a swampy mess half the year, so much so that the Ohlone Indians traversed vast sections of the valley not on foot but in canoelike rafts that they made out of reeds. In the summer, the rivers sank back inside their banks and the land dried out. A tiger salamander couldn't find a happier home.

Now, it is the most likely local species to be moved onto the federal endangered species list. The black and yellow striped amphibian mates and lays eggs in water, but spends most of the rest of the year roaming about on dry land--a range of habitat that is hard to find these days.

In the winter, when rains create temporary ponds,

salamanders find their way into these pools to mate.

After a few days, the salamanders abandon the pond and each other and go on what David Wright, a biologist with the U.S. Fish and Wildlife Service, calls a walkabout. The amphibians can travel up to a half a mile from the pond, he says. Like burrowing owls, they look for vacant ground-squirrel holes and hunker down for the hot, dry summer. They come out at night to look for earthworms, snails, insects, fish and even small mammals.

Because they require both seasonal pools, almost entirely paved or plowed over in the valley, and the open grassland that attracts ground squirrels, the tiger salamanders have been pinched by the human impulse to develop. "Anything that modifies their breeding habitat and the surrounding land is going to have an effect--urban, suburban and agricultural development, even row crops and orchards," Wright says.

Ranching is about the only land use that is compatible with the species, he says.

The few salamanders that remain in the valley have indeed been pushed to its edges. According to Breon, some developers have attempted to move larvae of salamanders by depositing them in the Kirby Canyon area of the eastern hills. The district attorney investigated allegations that Cinnabar Hills Golf Course developer Lee Brandenburg bulldozed ponds near Calero Reservoir which biologists believed contained the rare salamanders. Charges were never filed.

Even with the best intentions, salamanders can have a tough go of it. At Stanford, the population is faltering. Their summering habitat is across Junipero Serra Boulevard from their breeding ponds. At night, when they cross the road, many of them are run over by cars. The university is considering building an underpass for the creatures, but Wright is skeptical.

"Tiger salamanders are pretty focused on getting from point A to point B; they travel in straight lines and have a very good orientation system," Wright says. "If you put up a fence, they will go over or through it."

After a century of paving, flood control projects and golf-course sculpting, this valley just isn't the amphibious paradise it used to be.

[San Jose | MetroActive Central | Archives]

From the November 24-December 1, 1999 issue of Metro, Silicon Valley's Weekly Newspaper.

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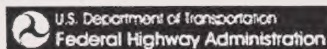
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Linking Habitats and Reducing Roadkill

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Salamander Tunnels

Massachusetts



The spotted salamanders commonly seen in New England and the eastern United States are glossy black with two rows of bright yellow spots down their backs and tails. They can crawl up to half a mile. One night every spring they leave their underground forest homes and migrate to wetland ponds to breed. Salamanders are famous for their energetic "love dance." The females' eggs hatch quickly into larvae, and the larvae develop into young adults that emerge from their ponds in summer or early fall to migrate back to the forest. Unlike many amphibians, adults have a high survival rate.

Every year after the first spring rains in Amherst, Massachusetts, volunteer "bucket brigades" used to stop traffic along Henry Street to carry migrating salamanders safely across the road.

That is, until the animals could cross on their own through two underpasses.

Two-lane Henry Street separates salamanders from the warm, fishless vernal pools (small temporary ponds) where they migrate every spring to mate and to lay their eggs. "Local residents knew when the salamanders would head for the pools," says wildlife biologist and consultant Tom Tying. "They knew the prime conditions for migration - sustained rain, the beginning of a thaw, and temperatures above 42 degrees."

Those who came out to watch the nighttime migration noticed salamanders killed on the road. When word spread about the animals' plight, the British Fauna and Floral Preservation Society and ACO Polymer in Germany provided funds for an experimental tunnel project on Henry Street. The Amherst Department of Public Works, University of Massachusetts, Massachusetts Audubon Society, Hitchcock Center for the Environment (a local conservation group), and local residents worked together to make it happen.

In 1987 two **tunnels**, 200 feet (61 m) apart, were built at the salamanders' crossing site, and short "drift fences" were constructed to guide migrating salamanders into the **tunnels**. Each tunnel had a slotted top to let in light and provide the damp conditions salamanders need.



One night every spring, most of Amherst's migrating salamanders use these **tunnels** to get to vernal pools where they mate and lay their eggs.

To study the effectiveness of the project, volunteers caught salamanders as they approached the **tunnels** and marked each one with a colored paper dot representing the section of fence from which they had come. "We wanted to be sure the length of the fence didn't interfere with the salamanders' movement into the **tunnels**," says Scott Jackson, University of Massachusetts amphibian and reptile expert. "If it did, the two **tunnels** would need to be closer."

Study results indicated that salamanders at fences farthest from the **tunnels** were just as successful in reaching the **tunnels** as those at fences closer to the entrances. The study also revealed that more than three quarters of the animals that reached the **tunnels** successfully used them to cross the road.

Jackson offers these tips to those who may be considering **salamander tunnels** in their communities:

- Design **tunnels** to accommodate specific site conditions.

- Avoid single-species designs.
- Know the biology of the target species.
- Locate **tunnels** close to the movement corridors of these species.
- Monitor the project and make appropriate adjustments.
- Share the results (positive and negative).



A "Watch Out for Salamanders" sign identifies the location of the Henry Street **tunnels** and warns motorists to drive slowly.

For more information, contact Scott Jackson at 413-545-4743 or sjackson@umext.umass.edu, or Tom Tynning at 413-442-2165 or ttynning@massaudubon.org

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United States Department of Transportation
Federal Highway Administration

Criticr Crossings: Linking Habitats and Reducing Roadkill

Salamander Tunnels

Massachusetts

[Photo: Spotted salamander - The spotted salamanders commonly seen in New England and the eastern United States are glossy black with two rows of bright yellow spots down their backs and tails. They can crawl up to half a mile. One night every spring they leave their underground forest homes and migrate to wetland ponds to breed. Salamanders are famous for their energetic "love dance." The females' eggs hatch quickly into larvae, and the larvae develop into young adults that emerge from their ponds in summer or early fall to migrate back to the forest. Unlike many amphibians, adults have a high survival rate.]

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Photo: Salamanders exiting a tunnel - One night every spring, most of Amherst's migrating salamanders use these tunnels to get to vernal pools where they mate and lay their eggs.]

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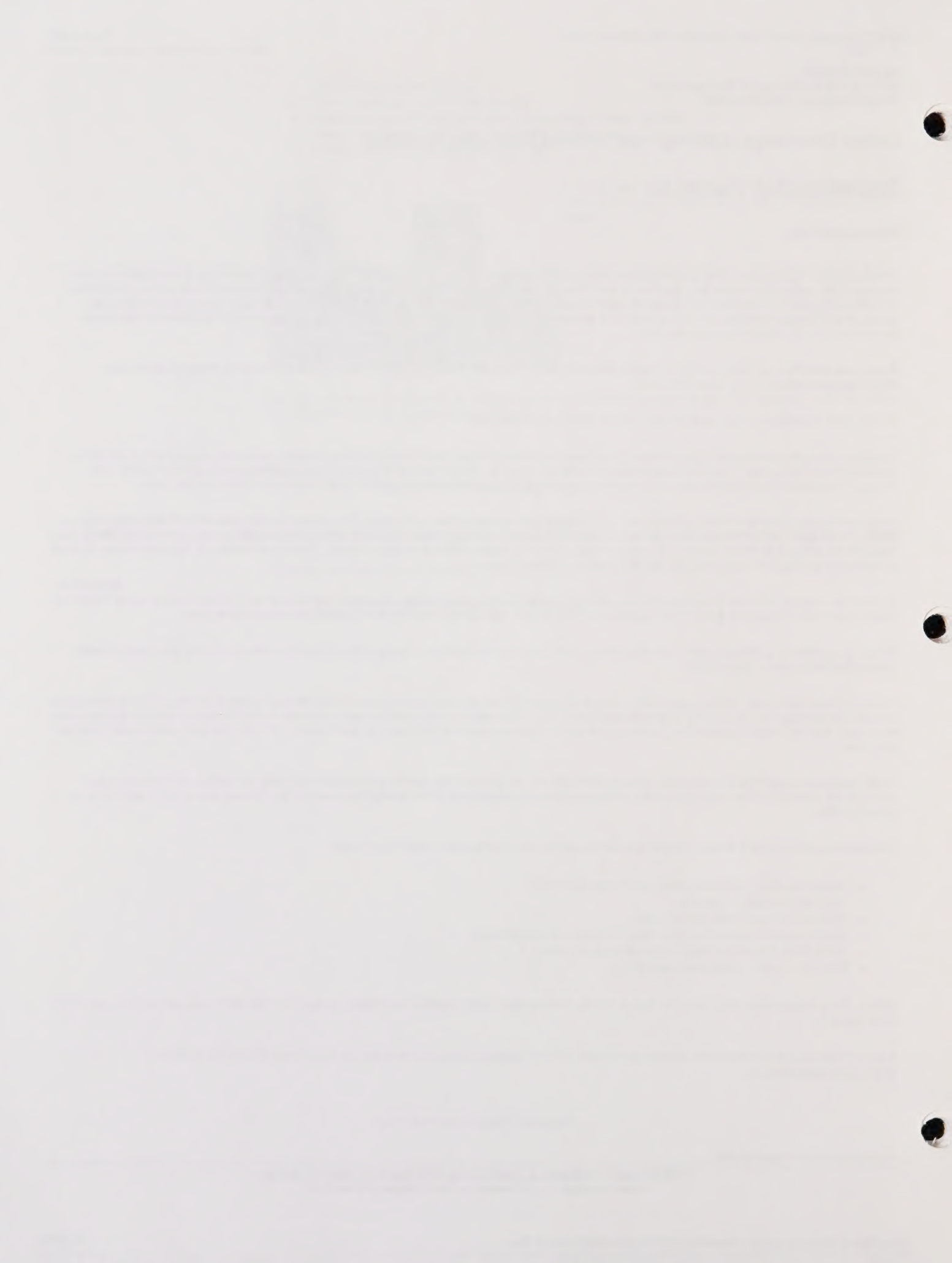
[Photo: "Slow Salamander Xing" sign - A "Watch Out for Salamanders" sign identifies the location of the Henry Street tunnels and warns motorists to drive slowly.]

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